MEMOIRS OF DR. EDWARD JENNER.

With his Portrait, elegantly engraved by Hopwood.

DR. EDWARD JENNER, who has acquired ſuch well merited celebrity by the important diſcovery of Vaccine Inoculation, is the youngeſt ſon of the rev. Stephen Jenner, M. A. of the univerſity of Oxford, rector of Rockhampton, and vicar of Berkeley in Glouceſterſhire, and was born in that place in the year 1749. His father was poſſeſſed of conſiderable landed property in the ſame county, in addition to his church preferment. His mother was the daughter of the rev. Henry Head, of a reſpectable family in Berkſhire, who had alſo formerly been vicar of Berkeley, and at the ſame time a prebendary of Briſtol. Dr. Jenner had the misfortune to loſe his father at an early period of his life; but this loſs, which often impedes the due cultivation of early talents, was ſupplied by the affectionate attention of his elder brother, the rev. Stephen Jenner, who with a truly parental tenderneſs watched over his early days. After the uſual courſe of claſſical education, which he paſſed at Cirenceſter, Dr. Jenner was inſtructed in the rudiments of ſurgery and pharmacy, by Mr. Ludlow of Sodbury, whom he quitted in order to be placed under the immediate tuition of the late Mr. John Hunter; and with the latter gentleman he lived two years as a houſe pupil. Dr. Hunter, at this time, was deſirous of giving Lectures on Natural Hiſtory; and having formed a juſt opinion of the merits of his pupil, he offered him a partnerſhip in his buſineſs, which was very extenſive and lucrative. This flattering offer Dr. Jenner, who was ſtrongly attached to the place of his nativity, thought proper to refuſe; and for the ſame reaſon he declined the propoſal of an eſtabliſhment in India, which was held out to him in the moſt dazzling point of view. After finiſhing his ſtudies in London, Dr. Jenner ſettled at Berkeley, where his practice in phyſic and ſurgery ſoon became extenſive, and his abilities were rewarded with an increaſing reputation and emolument. His profeſſional duties, in a ſhort time, became exceſſively laborious, and he found himſelf neceſſitated to relinquiſh the moſt fatiguing parts of his buſineſs.

In conſequence of this determination, he ſhortly after took out a diploma. In 1788, Dr. Jenner married miſs Catherine Kingſcote, ſiſter to colonel Kingſcote, of Kingſcote in Glouceſterſhire, a family of reſpectability in that county, by whom he has three children, two ſons and a daughter. Having relinquiſhed ſurgery, he now found leiſure for his favourite ſtudies of phyſiology and natural hiſtory. As a proof of his ſkill in the latter branch, we may mention his having elucidated a very obſcure and much diſputed point in the natural hiſtory of the cuckoo. This ingenious diſquiſition, grounded on actual obſervation and happy conjecture, has excited the attention of naturaliſts; and the author was ſhortly after elected a fellow of the Royal Society. His inquiry into the nature of the cowpox commenced about the year 1776. He had obſerved, that many whom he had inoculated for the ſmallpox were inſuſceptible of the former diſorder. Theſe perſons had undergone the caſual cowpox, and a looſe opinion prevailed, that it was a preventive of the ſmallpox. After a variety of inveſtigations and obſervations, he was ſtruck with the idea of propagating the diſeaſe by inoculation, like the ſmallpox; firſt from the cow, and then from one human ſubject to another. He was inſpired with confidence from his ſucceſs in the firſt eſſay of this kind which he attempted; and a regular ſeries of experiments, inſtituted for the ſame purpoſe, was crowned with ſucceſs. Dr. Jenner commu-

nicated this happy diſcovery to the public, in a treatiſe publiſhed in June 1798, entitled 'An Inquiry into the Cauſes and Effects of the Variolæ Vaccinæ,' a diſeaſe diſcovered in ſome of the weſtern counties of England, particularly Glouceſterſhire, and known by the name of the Cowpox. In the courſe of the two ſucceeding years, he brought forward the reſult of his further experience in different publications, which were afterward collected into a volume. He has ſince publiſhed a ſmall tract, entitled 'The Origin of Vaccine Inoculation,' in which he gives an account of his firſt experiments and obſervations on that ſubject. Notwithſtanding the merit of this diſcovery, the author was aſſailed by the ſhafts of envy and malice, his diſcovery was firſt depreciated, and then denied; but truth ultimately prevailed, and obtained a triumph, honourable to the inventor and to the friends of humanity, and the practice of vaccine inoculation is now well eſtabliſhed in Great Britain, and is making a rapid progreſs over the world. It has been employed among the military, by Mr. Ruſh, ſurgeon-general to the army; and in the navy, by Dr. Trotter, phyſician to the fleet; and Dr. Blaine, one of the commiſſioners of ſick and hurt. Dr. Blaine obtained an order from the admiralty for this beneficial purpoſe. On this occaſion, the phyſicians and ſurgeons of the fleet preſented a gold medal to Dr. Jenner, together with a ſuitable addreſs. This was followed by other public honours from the Medical Society of London, the Suffolk Society of Surgeons, the Benevolent Medical Society of Eſſex and Herts, and the Phyſical Society, which latter body elected him a honorary aſſociate. Parliament beſtowed on him the ſum of 10,000l, and the larger ſum of 20000l, was only loſt by four votes. His important diſcovery was hailed with applauſe on the continent, and his Pruſſian majeſty was the firſt crowned head that ſubmitted his own offſpring to vaccine inoculation. The emperor of Germany followed his example, and encouraged the general practice by ſuitable rewards. Her imperial majeſty, the empreſs dowager of Ruſſia, has favoured the new diſcovery with her conſtant patronage; and in order to teſtify her eſteem for Dr. Jenner, her majeſty has ſent him a very valuable diamond ring, by the hands of lord St. Helens, accompanied with a letter, replete with the moſt flattering expreſſions. In ſhort, the new practice has been ſubjected to a ſevere examination in the moſt enlightened nations in Europe, and the more ſtrictly it was ſcrutinized, the more glorious was its triumph. America, under the auſpices of Jefferſon, has ſanctioned the approbation of the old world.

The following is a tranſlation of the letter from the empreſs dowager, conveyed to Dr. Jenner by the hands of lord St. Helens:

Sir,

'The practice of vaccine inoculation in England having been attended with the happieſt ſucceſs, which is well atteſted, I have eagerly imitated that example, by introducing it into the charitable eſtabliſhments under my direction. My endeavours having perfectly anſwered my expectations, I feel a pleaſure in reporting their ſucceſs, and in teſtifying my acknowledgements to him, who has rendered this ſignal ſervice to humanity. This motive induces me to offer to you, ſir, the ring ſent herewith, as a teſtimony of the ſentiments of eſteem and regard, with which

I am, yours affectionately,

Paulowſky, MARY.'

Aug. 10, 1802.

The Britiſh public, ſince the publication of Dr. Jenner's valuable and important diſcovery, have manifeſted a laudable zeal in promoting the beneficial effects of his invention; and different deſcriptions of people have vied with each other in their expreſſions of admiration and eſteem for the inventor. A numerous and reſpectable meeting was held at the London tavern January 19, 1803, in which

an addreſs to the public was voted, recommending the eſtabliſhment of an inſtitution in a central part of the metropolis, in order to carry into effect the practice of the vaccine inoculation. At this meeting, a motion was made by the duke of Bedford, at the ſpecial requeſt of his royal highneſs the duke of Clarence, that the thanks of the meeting ſhould be tranſmitted to Dr. Jenner, expreſſive of their high ſenſe of his merit, and the importance of his diſcovery. A reſolution was alſo adopted of forming the meeting into a ſociety for the extermination of the ſmall-pox, and a liberal ſubſcription was entered into for that purpoſe, in which we diſcover the names of ſeveral noblemen of the firſt rank. At the Vaccine Inſtitution dinner on Monday, February 7, many viſitors ſubſcribed largely to carry into effect the benevolent purpoſes of that ſociety. The name of the promulgator of the Vaccine Inoculation was mentioned with applauſe, as likewiſe that of Dr. Pearſon, who had eſtabliſhed the new inoculation by the evidence of practice. Dr. Pearſon on this occaſion deſcanted very largely on the importance of the diſcovery, and the juſtly acknowledged merit of the inventor. Not long after, in order to give more exalted patronage, and a wider effect to the happy effects of this diſcovery, the Royal Jennerian Society was inſtituted, which has the king for its patron, and the queen for patroneſs; the four ſenior princes are vice-patrons, and the princeſs of Wales, ducheſs of York, with the five princeſſes, have undertaken the part of vice-patroneſſes. It muſt therefore prove highly gratifying to the feelings of Dr. Jenner, to be the object of ſuch general approbation, and to have acquired a diſtinction and celebrity in a manner ſo beneficial to mankind, and ſatisfactory to himſelf, a circumſtance which has ſeldom taken place with reſpect to the great improvers of ſcience and cultivation in former times, who were, with few exceptions, expoſed to the ingratitude and neglect of their contemporaries, and who had only to conſole themſelves with the proſpect of the more favourable deciſions of poſterity.

ENGLAND AND FRANCE CONTRASTED.

[From 'A Tour through ſeveral of the Midland and Weſtern Departments of France, in 1802:' by the Rev. W. Hughes.]

IN France there are no tythes; no church-rates; no poor-rates; taxes there are, and muſt be wherever there is a government; but compared with thoſe he is accuſtomed to pay they are as four to forty; nay, taking the circumſtances abovementioned into the calculation, I do not believe they are more than as four to fourſcore: they have copied the moſt grievous of our impoſitions—they have a land-tax, a window-tax, and taxes upon luxury; the latter not a whit more accommodating than exactions of a ſimilar deſcription in England; but, taken together, the agregate but juſt exceeds the ſixth part of a man's rent-roll, *i. e.* 3s 6d in the pound.

What is the inference from all this? that France is the more eligible country in which to fix our abode?—unqueſtionably not—the country is fine; the climate is delectable and ſalubrious; the people are gentle, affectionate, amiable; plenty abounds; taxation is eaſy; and neither tythes, poor-rates, nor church-rates, are exacted; and, to crown the whole, every man ſerves his Maker according to the dictates of his own conſcience, without penalty and without fear—what then do you want more you will ſay? Why, only one little circumſtance more, which gives zeſt to every advantage, and without which all that we can poſſeſs is nothing—a circumſtance which Britain proudly boaſts, and which, I truſt, it will boaſt

till time ſhall be no more—a circumſtance which has given it commerce, trade, manufacture, and will maintain them in their envied pre-eminence as long as it ſhall laſt. While the ſword peaceably reſts in the ſcabbard, the valetudinarian may ſeek, within the precincts of the republic, the health which the fogs and the intemperance of his native iſle have impaired; the man of ſcience and obſervation may go thither to improve his taſte by ſtudying the remains of accompliſhed antiquity; and he who courts relaxation may amuſe himſelf with novelty and variety, and circulate a few of his ſuperfluous guineas; but he who is determined, at all events, be the conſequence what it may, to canvaſs all the proceedings of the political circles—to cavil at every thing he does not approve or comprehend, and ſound the whoop of tyranny and oppreſſion as often as the exigencies of the ſtate demand ſupplies, had better ſtay at home; France is not the country in which freedom of ſpeech is tolerated: one ſovereign ſpecific cures all curioſity, huſhes all grumbling, ſilences every complaint: law is reduced within a very ſmall compaſs; there is no need there of 'Statutes abridged;' *Sic Volo* of the grand conſul has power to ſolve all difficulties, to quiet all the qualms of judge and jury, to conſtitute right or wrong: under military government, perſon and property are held in a ſort of vaſſalage, and, as often as the one or the other are convenient to the haughty tyrant who ſits exalted upon the ſhoulders of the crouching multitude, the prayers, the tears of the widow and the fatherleſs become inſignificant as the drops of the morning, or the ſighing of the breeze: nay, ſhould thoſe hapleſs unfortunates, preſuming upon the righteouſneſs of their cauſe, dare to become ſulky or clamorous—though there be no baſtile wherein to encage them till they have learnt not to trouble their ſuperiors with their idle and impertinent wrongs, yet there are other modes of reducing clamour to taciturnity, equally effectual, at hand. He, therefore, who ſets a value proportioned to its worth upon the ſyſtem of rights which his forefathers nobly wreſted from a tyrant's hand, who defies even power to wrong him till his peers have given him leave, who can neither be taxed nor judged but by his peers, who glories in a conſtitution to which the prince and the peaſant are equally amenable, will never think of bartering privileges like theſe for aught the continent can give him. What matters it that I can purchaſe lands cheaply, as above ſtated; that my huſbandmen toil for ten-pence a day; that proviſions are fifty per cent lower than in Britain; that taxation is eaſy; church-rates and tythes gone to their own place; and the poor maintained as they ought to be—if I have no ſecurity from injury, if I dare not exert the privilege which the God of nature gave me, if the breath of a tyrant may annihilate my fortune in a moment, reduce me to beggary, confine me in a dungeon where my complaints cannot be heard, or ſend me acroſs the Atlantic to delve in the bogs and moraſſes of Cayenne? All, all I poſſeſs beſide is nothing; it is ſecurity, the darling of my ſoul, which renders what I attain worth enjoying: take from me my ſecurity, and you deprive me of that which is more valuable than my life: it is ſecurity which gives the ſpur to my induſtry; it is ſecurity which cheriſhes the adventurous ſpirit of commerce; it is ſecurity which enables me to look forward to old age with cheerfulneſs and hope; and if I muſt reſign my ſecurity I would as ſoon live in awe of the bow-ſtring as of the guillotine. What is it that has introduced ſo many valuable arts and manufactures into Britain?—Security. What is it even now which here gathers together, as in one focus, men of ſcience and experiment from every civilized region of the earth?—Security. Why do they fix upon Britain, rather than their native countries, for developing their diſcoveries? Becauſe in Britain only

can they reap in ſecurity the reward of their labours; and while ſecurity ſhall be extended, as hitherto, to perſon and property, while fortune and life are held, not of the capricious will of a deſpot but of the will of a nation, generous and juſt, though ſometimes the dupe of accompliſhed craft, France will in vain endeavour to enter into competi ion with it: it may ſpread abroad all its allurements, it may lay every poſſible reſtraint upon Britiſh merchandize, and endeavour to ſeduce its manufacturers from the comfort and luxury in which they live, but in vain; till it offers them a government a-kin to the Britiſh, till the torpyfying influence of deſpotiſm ceaſes to palſy and to affright exertion, it muſt be content to move on as it has done, and hold its ſceptre over a herd of impoveriſhed ſlaves! Britons will turn away from the gilded bait, nor ſacrifice the ſolid realities they poſſeſs to any Utopian viſions with which French philoſophy may endeavour to beguile them.

One anecdote may ſerve to illuſtrate the truth of theſe poſitions, and calm the fears of thoſe who tremble for the arts and manufactures of their native iſle.

There was in London not long ſince, he may be there now, a French gentleman ſoliciting a patent for the excluſive advantage of ſome capital improvement in the art of making cables: he had eſtabliſhed a manufactory in France, but the moment that peace opened the acceſs to this country he came over for the purpoſe above ſtated: being queſtioned how, under all the local advantages which France poſſeſſes, he choſe rather to eſtabliſh himſelf here than there, his anſwer was ſtriking: 'It is the ſecurity which England extends to all which determined him to fix upon it as the theatre of his exertions. At home, is there a fleet (ſays he) to be fitted out with diſpatch, it matters not that my total ruin may be the conſequence, my whole ſtock in trade is inſtantly laid under requiſition, months and years of ſolicitation for payment may be unavailing: when my connections are paſſed into other channels, my family is reduced to poverty, and my patience exhauſted, I may account myſelf happy if I can obtain from the miniſter of the marine the half of my demand, and perhaps am mocked with an order of government, like the proprietors of the late Rue de Necaiſe, for lands in St. Domingo, by way of payment.'

The caſe muſt be the ſame whereever the product of a manufactory may be neceſſary to the plans of the firſt magiſtrate; and under ſuch circumſtances it is needleſs to ſay that it can never flouriſh to any alarming extent. Attachment to the natale ſolum, and ignorant and bigoted prejudices againſt every man who is not a Frenchman, may retain at home what manufacturers it already poſſeſſes, and carry on a languid trade; but men of deſperate fortunes alone will join them from other countries, it would be inſanity to tranſlate either capital or talents, even from Pruſſia, into France; and equally inſane is the emigration of him whoſe ſole fortune is in his hands; encouragement like that he meets at home he muſt no where hope to find; in France it is abſolutely impracticable to find it: a Frenchman has neither talent nor temper for buſineſs; he has no conception of ſyſtem; he knows nothing of the diviſion of labour; his workſhop is a perfect chaos; all his means are employed to the greateſt poſſible diſadvantage; and he quits his trade preciſely at the moment when it begins to be moſt improveable: of courſe, while the Engliſhman ſells you a decent broad cloth at one guinea the yard, the Frenchman cannot furniſh one of equal quality at leſs than one guinea and a half; and were the wages of labour in the one country equal to the wages of labour in the other, he could not ſell it for leſs than fifty per cent more.

With every advantage which the country preſents unto him, the French

mechanic pines in poverty; his temperance alone preſerves him from ſtarving, and as thoſe who toil on the weſtern ſhores of the channel are not remarkably addicted to temperance, they cannot make a more egregious miſtake than when they ſuppoſe they ſhall better their condition by emigration. Of the hundreds who have made the experiment I queſtion if there be a dozen who have not bitterly lamented it.

ACCOUNT OF THE PILCHARD FISHERY.

[From 'Rural Sports.'—By W. Daniel, vol. 2.]

THE pilchard has a general likeneſs to the herring, but, when comparatively deſcribed, is eſſentially different. The body of the pilchard is leſs compreſſed, being thicker and rounder, the back is more elevated, the belly leſs ſharp, the noſe turns up, and, as well as the under jaw, is ſhorter; the dorſal fin is placed exactly in the centre of gravity, ſo that when taken up by it, the body preſerves an equilibrium, that of the herring dips at the head; the ſcales of the pilchard adhere cloſely, whereas thoſe of the herring very eaſily drop off; beſides, the pilchard is fatter, or more full of oil.

About the middle of July, the pilchards, in vaſt ſhoals, approach the Corniſh coaſts; the beginning of winter they diſappear, a few returning again after Chriſtmas. Their winter retreat, and their motives for migrating, are the ſame with the herring. During ſummer they affect a warmer latitude, no quantities being found on any of our coaſts, except thoſe of Cornwall; namely, from Fowey harbour to the Scilly iſles, between which places, for ſome weeks, the ſhoals keep ſhifting.

The appearance of the pilchard is known by the birds and larger fiſhes attendant upon them, and perſons called *Huers* are placed on eminences, to point to the boats ſtationed off the land the courſe of the fiſh, by whoſe directions, ſometimes, a bay of ſeveral miles extent is encloſed with their nets, called ſeines. By the firſt of James 1, c. 23, fiſhermen are empowered to go on the grounds of others to *hue*, without being liable to actions of treſpaſs, which before occaſioned frequent lawſuits. The numbers that are taken at one ſhooting of the nets is aſtoniſhing. Upon the 5th of October, 1767, there were at one time encloſed in St. Ives Bay, 7,000 hogſheads, each caſk containing 35,000 fiſh, in all, 245,000,000.

Dr. Borlaſe deſcribes the emoluments accruing to the inhabitants of Cornwall from the pilchard fiſhery in the following manner.

'It employs a great number of men on the ſea, thereby training them to naval affairs; finds work for men, women, and children, on ſhore, in ſalting, preſſing, waſhing, and cleaning, in making boats, nets, ropes, caſks, and in all the trades depending on their conſtruction and ſale. The poor are fed with the offals of the captures, land is benefited by the refuſe of the fiſh and ſalt, the merchant finds the profits of commiſſion and honeſt commerce, the fiſhermen the gains of his labour, ſhips are often freighted hither with ſalt, and into foreign countries with the fiſh, carrying off at the ſame time part of our tin. By the account of the produce in number of hogſheads exported each year, from 1747 to 1756, incluſive, from the four ports of Fowey, Falmouth, Penzance, and St. Ives, it appears that Fowey has yearly exported 1,732 hogſheads and two thirds; Penzance and Mounts Bay, 12,149 hogſheads, and one third; St. Ives, 1,282 hogſheads; in all, 29,795 hogſheads. Every hogſhead for ten years laſt paſt, together with the bounty allowed for each exported, and the oil made out of each hogſhead, has amounted, at

an average, one year with another, to the price of 1l 13s 3d; ſo that the caſh paid for pilchards exported has, at a medium, been annually 49,532l 10s.'

It is almoſt impoſſible to diſmiſs this topic, without expreſſing ſurpriſe, that a nation ſo induſtrious and enterpriſing as our own ſhould neglect (as moſt unaccountably it does) to improve to the utmoſt a branch of commerce of which the advantage ſeems incalculable, and the ſucceſs certain. We are ſurrounded by a golden mine, which we look upon with unconcern, at the ſame time we exceed our capital in the moſt perilous ſpeculations. That immenſe ſuperiority of advantage, which its extended line of coaſt preſents to the Britiſh iſlands, for the improvement of the fiſhing trade, a trade which, beſide that it is convertible into a ſource of prodigious wealth, offers conſiderations of great moment to the ſtateſman, whoſe firſt concern it ought ever to be, to meliorate the moral condition of the people. To colonize our coaſts, is an object of deeper intereſt than to populate new regions of the globe, or to ſubject diſtant climates to our empire. In proſecuting the fiſhing trade, neither immediate nor immenſe profit to the maritime ſettlers muſt, or can reaſonably, be looked for; thoſe who engage in it ought to meet on the part of government with all the aid which the nature and object of the undertaking demand: let thoſe who enter upon it purſue it with a view to private profit, but let the ſtateſman encourage it as an object of national utility. To proſecute it with effect, its progreſs muſt be ſlow, and its ſcale moderate; the end can never be obtained through the wild ſpirit of adventure; it muſt primarily be conſidered as finding occupation for the idle; as it improves, it will furniſh employ for the capital of the ſpeculator. If a bounty were given to the firſt ſettlers, and continued annually for a time, as circumſtances might require, it would be much more beneficially beſtowed than bounties uſually are. Certain immunities from taxation, for a given period, might be likewiſe held forth as an encouragement, and to theſe might be added ſuch other incitements as wiſdom and policy might ſuggeſt. The true and effective wealth of a nation conſiſts not in the gold that accumulates, nor the diamonds that glitter, in the coffers of the rich, but in the ſweat wiped from the brow of the indigent; it is compriſed in the augmentation of the means of ſubſiſtence, in the vigorous and active habits of the poor, in the ſtability of their occupation, in the ſobriety of their morals, and in the modes of obtaining ſufficiency and comfort through the medium of honeſt and unoppreſſive labour. Under this conviction, a wiſe government will ever be ſtrenuous to enlarge the ſphere of uſeful traffic, and to expend the induſtry of its people upon the moſt valuable objects. Fiſhery, as affording a ſupply of nutritive and cheap ſuſtenance to all, more eſpecially the inferior claſſes, is unbounded: the hardy and robuſt habits of life, likewiſe, which fiſhermen aſſume and encounter, are friendly at all times to the ſtrength and independence of a ſtate; ſelecting, as they naturally would do, with care the moſt eligible ſtation which our ſhores (taking in a circumference of more than 3000 miles) preſented to their choice, they would become more peculiarly ſo. Stationary in their abode, and multiplying their habitations as their numbers increaſed, they would, in proceſs of time, form ſo many frontier towns: our coaſt would not then, as now it does, leave us naked and expoſed to the deſcent of our enemies: theſe towns would become the nurſeries of healthy and able ſeamen, a circumſtance of extreme weight in the councils of a maritime nation.

It may perhaps be alleged, that the fiſhery would not be a perpetual employment, and that, conſequently, the perſons engaged in it would be unoccupied ſeveral parts of the year; but

this objection has little force: there are many manufactories inſeparably connected with this branch of traffic, ſuch as dreſſing of hemp, ſpinning of twine, making of nets, ropes, boats, barrels, &c. which would provide ſufficient buſineſs during thoſe intervals of leiſure, which the fiſhery might afford. The ſame objection moreover might be urged againſt almoſt every trade, ſince moſt of them have their ſeveral vacations: agriculture itſelf by no means furniſhes employment equally active at all ſeaſons; but private intereſt will always take care to obviate every inconvenience that might ariſe from this ſource, and as the want of work at certain periods enters into the price of the commodity, this conſideration, therefore, cannot operate as a diſcouragement.

In a country like our own, where the number of poor is a reproach to the police, and a heavy burden to the nation, a project of this kind deſerves peculiar attention. A late writer, adverting to this ſubject, has enforced the importance of the undertaking we would recommend. To ſooth (ſays he) the ſmartings of calamity, to bind up the wounds of thoſe whom fortune has cruſhed under her wheel, is real and exalted virtue; but there is a philanthropy of a yet higher order, which is buſied in removing the cauſes and occaſions of want and poverty, and enabling thoſe expoſed to them themſelves to ſupply the one and exclude the other. The eſtabliſhment of Friendly Societies has done much to prevent the increaſe of parochial poor: the incloſure of waſte lands, ſo rapidly carrying on in various parts of the kingdom, has likewiſe, among other eſſential advantages, contributed to the ſame good effect. Were our preſent ſyſtem of poor laws (he adds) judiciouſly reviſed, and a ſelect committee appointed in each pariſh to examine into the application and expenditure of the ſums annually aſſeſſed for the relief of the indigent; and were the reductions which might be effected by a reformation in thoſe laws, and a controul on that expenditure, applied in erecting ſmall dwellings near the ſea-coaſt, for the encouragement and extenſion of our fiſhing-trade, and in ſupplying ſuch as might embark in it with the few materials neceſſary to their eſtabliſhment, great benefit might accrue to the ſtate, and the numbers of its local and vagrant poor be much more effectually diminiſhed than in workhouſes, or confining them in common goals and houſes of correction.

The above ſubject has but incidentally been touched upon, did not the nature of this work forbid dwelling upon it, much more might be urged: of what is here ſaid, the intention has been to recommend it to the grave and deliberate meditation of others: it is indeed a matter of ſupreme importance, and moſt worthy to draw toward it the care of the ſtateſman and the exertions of the patriot.

A NEW METHOD OF PROPAGATING POTATOES.

Communicated to the Bath and Weſt of England Society, by the Rev. J. Barton.

HAVING a piece of ground choaked up with potatoe ſtalks, from the negligence of the labourers employed in cleaning it of a preceding crop, this gentleman carefully planted about 100 of them in drills, in the ſame manner as cabbage plants, firſt pulling off the potatoes that adhered to the roots. The experiment ſucceeded beyond his expectation, as each ſtalk produced from ten to fifteen, ſome of them uncommonly large. This method of culture, particularly in wet ſoils, may probably ſucceed better than that commonly practiſed; as there would be no danger of their rotting, which the ſeed potatoes are apt to do: thus the markets might be ſupplied, not only with the root itſelf, but alſo with the ſtems, which could be ſold in the ſame market as cabbage plants.

EMMA: OR THE ARTIST.

Concluded from Page 293.

THE lovely form of the intereſting Emma ſo completely occupied my imagination, that upon retiring to my apartment I found it was impoſſible to ſleep, and the night was paſt in ſuggeſting different methods by which I might remove her father's diſtreſs. After forming and rejecting a variety of pretences for introducing myſelf to captain D——, I at length determined to ſay I was a friend of Mr. Topham's, and that I had buſineſs of importance to communicate reſpecting his affairs.

Never did time appear to move with ſo heavy a motion, never did the ſun's ſhadows ſeem extended to to ſuch a length; but the wiſhed-for hour arrived, Dorothy was punctual, and I had the pleaſure of hearing her approve my deſign. Still I perceived the faithful creature appeared doubtful of my ſincerity, and ſeemed fearful that I entertained thoughts injurious to the object of her care; but at length I had the happineſs of diſperſing her apprehenſions, and of ſubſtituting confidence in the place of fear.

We agreed that it would be better to poſtpone my viſit until the following morning, as the unfortunate captain D—— had retired to reſt: I accordingly returned to the inn, wrote to my banker, and informed him I ſhould in the courſe of a few days want eight thouſand pounds. I mounted my horſe about ten o'clock in the morning, and rode him pretty faſt three or four miles, then directed his ſteps toward the emboſomed cottage, with thoſe delightful ſenſations, which an intended act of benevolence inſpires. Dorothy and myſelf met as perfect ſtrangers; I deſired her to inform captain D—— I had buſineſs of the utmoſt conſequence to impart: that I was a friend of Mr. Topham's, by whom I had been directed to find out his reſidence, and that I flattered myſelf he would not be diſpleaſed with the news I brought. I was inſtantly conducted into a ſmall apartment, and upon my entrance captain D —— attempted to riſe, but was prevented from doing it, by his amiable daughter gently reſtraining him, by laying her hand upon his arm. 'You will excuſe my father's riſing, ſir,' ſaid ſhe, in the ſweeteſt accents, 'when I tell you that for the laſt ſix months he has been an invalid; but if you come from Mr. Topham with any pleaſing intelligence, I hope to have the felicity of ſoon ſeeing him reſtored to health.'

'Mr. Topham, madam, (I replied) has keenly felt the injuſtice he has been guilty of, in not having made captain D —— acquainted with the embarraſſment of his affairs, but the death of a friend, has unexpectedly put him into the poſſeſſion of ſome property, and I am commiſſioned to diſcharge you father's debt.'

'Diſcharge it, ſir, did you ſay!' exclaimed the enraptured father, ſtretching out his emaciated hand toward his child. 'Did I hear right, my beloved Emma? Are you really independent? and is the anguiſh of remorſe removed from my mind? 'Compoſe yourſelf, my dear ſir, (I rejoined) you are completely independent; for I have received orders to pay you eight thouſand pounds, only requeſting the circumſtance may be ſecret, as Mr. Topham at preſent is not able to diſcharge his various demands. To you he was bound by the ties of friendſhip, as well as juſtice, therefore you are the firſt and the only perſon that will now be paid, but he indulges the hope of being able to evince the probity of his feelings to all his creditors at a future time.'

'Oh, ſir!' exclaimed the delighted Emma, 'what joyful intelligence do you bring; I hail you, not only as

the reſtorer of my dear father's property, but the preſerver of his life! May heaven reward you for having been the imparter of ſuch a reviving communication, and the inſpirer of ſuch exquiſite delight!'

'Oh, my beloved father!' continued ſhe, tenderly embracing him, 'Now I truſt I ſhall have the joy of ſeeing you reſtored to health! This is the ſummit of all my wiſhes, and unleſs I have this happineſs I ſhall derive little delight from wealth!'

'May the Almighty in mercy grant your wiſhes my deareſt Emma, and reſtore me to the prayers of my invaluable child! ſir,' continued he, ſtretching out his hand, 'I am totally unable to thank you, for language cannot expreſs the emotions of my mind!' I ſaw how much his ſtrength was overpowered by his ſenſations, and propoſed his taking a glaſs of wine; Emma flew to fetch it, thanked me for my attention, and in the tendereſt accents, implored him to compoſe the agitated ſtate of his mind. Perceiving her father more calm, ſhe requeſted I would excuſe her abſence for a few moments. 'We have a faithful ſervant, or rather friend,' ſaid ſhe, 'who has been the ſharer of all our griefs, and I am impatient to impart to her the news of their diſperſion, for I know her delight will be equal to my own.'

Though Dorothy had given me the moſt poſitive aſſurance that ſhe would keep my ſecrets, yet I could not help fearing it ſhould inadvertently be betrayed, and experienced no ſlight degree of uneaſineſs until the amiable Emma returned.

'Put away thoſe drawings, my ſweet girl,' ſaid her father, as ſhe entered, pointing to ſome unfiniſhed ones, which lay upon a deſk; 'for though they remind me of your filial affection, yet they always have excited ſenſations of remorſe in my mind. Ever ſince the failure of Mr. Topham, ſir, I have been ſupported by the exertions of my Emma; but I tell it you to my eternal diſgrace, for I fooliſhly ſquandered away a fortune upon unſatisfactory gratifications, and abſolutely made a beggar of my child!'

'If you have any pity for my feelings,' replied the agitated Emma, 'I implore you my beloved father to drop this diſtreſſing ſtrain; if you could have known half the delight I have felt in contributing to your comforts, you would almoſt be ready to embrace poverty again. For my part, I ſhall never behold one of my drawings, without feeling the moſt exquiſite ſenſations of delight; and gratefully thank heaven for bleſſing me with talents, by which I was enabled to procure you the common neceſſaries of life. It is for your ſake, not my own, that I rejoice in the recovery of your property; for you will no longer refuſe my wiſh of having advice; change of ſcene would be ſerviceable to you, I am certain; I wiſh you would reſolve to go immediately to the ſea-ſide.'

I perceived the amiable girl endeavoured to divert her father's attention from the ſubject which had ſo deeply wounded his mind; and therefore ſeconded the propoſal ſhe had made reſpecting a ſea excurſion, to which the fond father ſeemed inclined to yield. After a little further converſation, I took out my pocket book, and gave him a draft upon my banker, payable in three days, when, upon being preſſed to ſtay dinner, I accepted the invitation, ſaying I would return to him again after a ſhort ride.

The delight which I experienced from this act of benevolence was of that exquiſite nature, that I wiſhed to enjoy it unperceived; and turning into a bye path, I yielded to thoſe emotions which give a foretaſte of the felicity we are promiſed in a future life! 'Ye diſſipated gay ones,' ſaid I, mentally, 'ye thoughtleſs licentious, Oh! could ye but once experience theſe delights, how eagerly would ye forego thoſe unſubſtantial pleaſures, which degrade inſtead of improving the mind. How many thouſands of pounds are laviſhed upon expenſive entertainments, which might ſuccour the unfortunate, and re-

lieve the diſtreſſed: but the power of diſſipation deſtroys the feelings of humanity, and checks thoſe benevolent emotions which do honour to the human breaſt!' While indulging theſe ſenſations, my thoughts naturally turned to that Being whoſe bounteous bleſſings enabled me to experience theſe delights; and my heart overflowed with ſenſations of gratitude to the univerſal Author of all comforts, for rendering my lot ſo ſuperior to the major part of mankind.

Upon returning to the abode of the man whom I had reſcued from difficulties, I was aſtoniſhed at beholding a young clergyman, whoſe appearance was prepoſſeſſing, placed by his ſide; as I had been informed by Dorothy, that her maſter had concealed the place of his reſidence even from his moſt intimate friends. The countenance of the amiable Emma diſplayed a variety of emotions, but it was evident to perceive tenderneſs mixed with delight; and it required very little penetration to diſcover that Mr. Harcourt had made a ſtrong impreſſion on her mind. Soon after dinner ſhe quitted the apartment, and was inſtantly followed by the young man, and upon captain D—— obſerving that my eyes purſued them, he ſaid, 'I hope in a ſhort time to call Harcourt, my ſon. The alteration in my circumſtances never could have happened more opportunely, for the happineſs of my Emma is the firſt wiſh of my life; but had Harcourt appeared yeſterday, I never would have conſented to his making an abſolute beggar his wife. He is the younger ſon of a gentleman of very large property, but the greater part of it happens to be entailed; we reſided within half a mile of each other when I lived in Devonſhire, and a great degree of intimacy naturally took place. From children, Emma and Harcourt appeared formed for each other, ſo ſimilar were their diſpoſitions, and ſo congenial their taſtes, and his father, as well as myſelf, encouraged the growing attachment until the alteration in my circumſtances took place. The moment this was known, the elder Mr. Harcourt forbade his ſon from even viſiting at my houſe, and to prevent the poſſibility of diſobedience, in the courſe of a few days ſent him abroad.

'Though my amiable child never ſuffered a ſingle murmur againſt this mandate, yet I perceived the deep wound it had inflicted upon her heart, and had the miſery of knowing that I had not only diſſipated her fortune, but had been the means of deſtroying her peace. The efforts which ſhe made to ſoothe the reproaches of my conſcience, tended in ſome degree to leſſen her grief, for inſtead of her thoughts being conſtantly turned toward her abſent lover, the debility under which I laboured directed them frequently to me.

'About ſix weeks ago, at the deſire of his father, Harcourt returned to England to be preſented with a living, in a relation's gift; and from the moment of taking poſſeſſion, he has been endeavouring to diſcover our retirement, but never ſucceeded until this morn. With that diſintereſted affection, which has ever marked his conduct, he generouſly made Emma an offer of his hand, and with more filial fondneſs implored me to live with them, promiſing to do every thing in his power to promote the happineſs of my life. I heard him with delight, from knowing I was no longer the victim of misfortune, and that an alliance with my Emma would not be attended with diſgrace; and I have given my conſent, on condition that his father no longer objects to the choice which he has made.'

'His father (I exclaimed) is my friend and ſchoolfellow, though I have not ſeen him for ſeveral years. Will you make me your ambaſſador upon the occaſion? I am an idle fellow, and want ſomething to occupy my mind.' At this inſtant, the younger Harcourt joined us, when captain D—— immediately acquainted him with the propoſal I had made; the young man

united his thanks with thoſe of his intended father, and I determined to travel one ſtage that very night. I have always found ſo much gratification in contributing to the happineſs of my fellow-creatures, that I enter into their purſuits with an ardour few perſons feel, and therefore purſued my journey with a degree of expedition, which thoſe who were leſs intereſted could not have made.

Though my old friend received me with much warmth of expreſſion, yet a gloomy kind of anxiety ſeemed to overſhadow his mind, and upon enquiring into the cauſe, he candidly acknowledged that it was occaſioned by the ungrateful behaviour of his child. 'What has he done to convince you that he is ungrateful for your kindneſs?' ſaid I, pretending to be a total ſtranger to his affairs. 'Diſpoſed of his heart,' replied he, 'without my permiſſion, and perhaps by this time is married to an artful girl, not worth a crown!' He then informed me of the intimacy which had once ſubſiſted between himſelf and Emma's father; allowed that, previous to the alteration in the latter's circumſtances he had not diſapproved his ſon's choice: 'But (continued he) you know I cannot give my younger children large fortunes, and to think of marrying a beggar, is madneſs in the extreme! All my hopes however reſt upon the pride which D—— poſſeſſes,' for he would not receive an obligation from his moſt intimate friends; therefore I think it poſſible, if Henry even diſcovers his reſidence, that he will reject the offer of his hand.'

'Is the object of his affection endowed with uncommon beauty?' I enquired. 'No, far from it,' he replied, 'that the girl is very well:'—'Then it cannot be the ſame; but I accidentally met with a young lady on my journey, who, from living in extreme retirement, I thought might have been your ſon's flame;—yet ſhe was the loveliеſt creature imagination can picture, though the perfections of her perſon were greatly ſurpaſſed by thoſe of her mind, for ſhe abſolutely ſupported her father, and an old domeſtic, who lived with them, by the ſale of landſcapes, which ſhe drew with the moſt maſterly ſkill.'

'Tell me her name, my dear ſir,' ſaid he, with evident emotion, 'for the object of Henry's affection drew very well;' 'the ſurname,' replied I, 'muſt be concealed from motives of delicacy, but her chriſtian one is Emma, and ſhe is the moſt intereſting girl I ever beheld.'

'I ſhould think it was the ſame,' rejoined he, with evident vexation, 'if you were not ſo very warm in her praiſe; but Henry's Emma certainly poſſeſſed none of thoſe exquiſite attractions which could excite the very great admiration you expreſs.'—'Does it not excite your admiration to hear of a daughter ſupporting a father by her talents? Miniſtering to his comforts, aſſuaging his griefs, and endeavouring to reconcile him to that alteration in his circumſtances, which to his own miſconduct were to be aſcribed? It requires not the aid of beauty to render ſuch an object intereſting, but the young lady I allude to poſſeſſes every external charm, and was I a young man myſelf, and her affections unoccupied, with delight would I offer her my fortune and my heart. What domeſtic bliſs might be expected from a union with ſuch an angel, what refined felicity might be taſted with ſuch a woman for a wife; and if it ſhould be proved that this Emma is the object of Henry's tenderneſs, can his father be capable of blaſting all his happineſs in life?'

'In theory, your arguments, my friend, I allow are very ſpecious; but love and virtue, depend upon it, are unſubſtantial ſupports; and the diſtreſs which muſt inevitably attend ſuch an alliance would ſoon drive the tender paſſion out of doors.' 'But (ſaid I) ſuppoſe Emma, by any accident regained part of her fortune—allowing that her father was enabled to give her five thouſand pounds; would you

ſtill erect a barrier to deſtroy your ſon's felicity, or would you permit him to be happy with the object of his choice?'

'Moſt certainly I would,' replied Mr. Harcourt, 'and joyfully would I acknowledge Emma for my child; but never will I conſent to his indulging a boyiſh paſſion, which, by bringing poverty upon him, muſt likewiſe bring diſtreſs.' —— A very few moments were ſufficient to explain the alteration in captain D——'s circumſtances: the ſame ſtory reſpecting Topham was again told, and my friend made acquainted with the cauſe of my becoming an unexpected gueſt at his houſe. Henry was no longer accuſed of ingratitude. I was the bearer of an approving letter to captain D——, and knowing the anxiety which Emma would feel until his fate was decided, I quitted Devonſhire the next morn. I had poſitively promiſed to return in a fortnight, but found myſelf at the gate of the little cottage at the expiration of ten days, when, the moment Emma beheld me, the carnation tints which overſpread her features vaniſhed at my preſence, and was ſucceeded by a deadly pale.

'You wiſhed,' ſaid ſhe, in a faint accent, 'to check thoſe aſpiring hopes of happineſs, which preſumptive tenderneſs made me indulge; you are the meſſenger of ill news, and would not ſuffer illuſive pleaſures for any length of time to take poſſeſſion of my heart.'

'Never (replied I) allow your opinion to be formed upon proverbs; you are biaſſed by the adage of "Ill news flies apace;" but if I had been commiſſioned to impart it, I ſhould have been rather more tardy in my movements, ſo let me behold the ſunſhine of real happineſs again beam upon that face! Mr. Harcourt, I aſſure you, is anxious to embrace you as his daughter, and as his repreſentative I claim ſome reward for my toils.' So ſaying, I ſaluted the agitated Emma, who with the variety of emotions, burſt into tears.

It is unneceſſary for me to deſcribe the ſcene which followed; I was oppreſſed with acknowledgments until I could ſcarcely ſupport their weight; but before I took leave of this happy party, I bound Dorothy to eternal ſecrecy, by an oath which I made her take.

Of RAIN. *By* Richard Kirwan, LL. D. F. R. S. *Preſident of the Royal Iriſh Academy, &c.*

[From the Tranſactions of the Royal Iriſh Academy, &c.]

DIMINUTION of the temperature of air, replete with moiſture, below the degree at which its ſaturation takes place, whether this refrigeration were cauſed by rarefaction, or by the mixture of colder air, has been generally ſuppoſed the cauſe of rain; but this hypotheſis in both its branches has been ſatisfactorily refuted: the firſt by Sauſſure and the ſecond by De Luc: and in fact refrigeration will indeed ſeparate moiſture from air cooled below the temperature neceſſary to hold it in ſolution. But this ſeparation will terminate, if gradual, in the production of *dew*, as already ſeen, or, if ſudden, in the production of a *cloud*, as in the experiment of Tornea mentioned by Maupertius, but cannot nor has in any inſtance produced *rain*.

Rain is the immediate reſult of the union of the particles which form clouds; and this union is the conſequence of the ſubtraction of the electric atmoſpheres which keep them at a diſtance from each other; and this ſubtraction is itſelf the conſequence either of the ſuperior attraction of better conductors, or of the attraction or repulſion of other clouds. The conſequence of the *attraction* of clouds

is their *incorporation*, and the reſult of their incorporation is the increaſed volume of their conſtituent particles, an increaſe proportioned to the attraction that produced it; the increaſed volumes, thus produced, form thoſe drops whoſe collection we call *rain*. The weight of theſe being ſuperior to the reſiſtance of air, they neceſſarily deſcend, and the cauſe of their different ſize is thus clearly diſcerned.

The repulſion of clouds ſimilarly electrified, and not greatly differing in magnitude, terminates in a bare increaſe of diſtance; but, if their magnitudes be much diſproportioned, it may terminate in *attraction*, or at leaſt in forcing the conſtituent particles into cloſer contact, and thus by increaſing their magnitude effect the ſame reſult.

When the attraction takes place between clouds differently and highly electrified, and within what electricians call the *ſtriking diſtance*, the electric fluid is ſet free, the coaleſcence of the nubilous particles is more rapid and complete, and hence the large drops that follow flaſhes of lightning, or even floods, where the quantities both of vapour and electron are conſiderable, as between the tropics.

Upon theſe principles moſt of the phænomena relative to rain appears to me eaſily explicable; of theſe the moſt remarkable are: 1. That rains are more copious but leſs frequent in the ſouthern parts of our hemiſphere not much elevated over the ſea, than in the more northern latitudes. They are more copious when their productive cauſes occur, evidently becauſe the quantity of ſuſpended vapour is much greater in the hotter than in the colder regions; but they are leſs frequent, becauſe the variations of wind in different directions which introduce and intermix clouds indifferently electrified are leſs frequent; this might be proved by inſtancing the rainy ſeaſons between the tropics, were it not that this illuſtration would extend this paper to too great a length. Even in moderately elevated ſituations between the tropics, if inſulated and of ſmall extent as the iſland of St. Helena, it ſeldom rains.

2. That, in the temperate latitudes, rains are alſo more copious, though commonly leſs frequent, in *ſummer* than in *winter*, for the reaſons already aſſigned. *Dry* ſummers are then the conſequence of uniform winds, from whatever quarter they may blow, as *wet* ſummers are of their variation, particularly if in oppoſite directions, and if they reach heights ſufficient to intermix the clouds that ſubſiſted during the reign of their antagoniſts.

3. Southerly winds are moſt frequently accompanied with rain, in moſt parts of Europe at leaſt, and probably in moſt parts of our hemiſphere; but *northerly* and *eaſterly*, with clear, dry, and ſerene weather. Becauſe ſoutherly winds are not only warmer, proceeding from warmer climates, but alſo more highly electrified than the ſoil of the colder countries into which they flow. Hence the copious vapours they contain are quickly deprived of part of their electron, and thus converted into clouds; but the ſuperior ſtrata of the atmoſphere under which the ſouthern air is introduced, not being ſupported by air as denſe as that which ſubſiſted under them before their introduction, neceſſarily deſcend and mix with the inferior ſouthern air; by this intermixture they are warmed, and deprive the clouds already formed and in its vicinity of part of their electron, or perhaps in conformity to the eleventh principle, they are themſelves deprived of part of their electron by thoſe clouds; in either way clouds differently electrified muſt be formed. Hence proceeds their gradual attraction to each other which terminates in thoſe gentle ſhowers that uſually accompany this wind. Northerly and eaſterly winds on the contrary, proceeding from colder countries are leſs highly electrified than the ſoil of the countries they invade; and hence from the oppoſite reaſons to thoſe juſt

mentioned they introduce ſerenè weather and a diſpoſition adverſe to rubification.

The reaſons hitherto adduced to explain the different effects of theſe different winds, evidently aroſe from an ignorance of the origin and progreſs of theſe winds. It was imagined that ſoutherly winds, flowing into colder countries were ſuddenly cooled by an intermixture with the colder air of thoſe countries, and that thus their vapour were condenſed into rain, yet, even ſo, this intermixture could only produce clouds and not rain, but in fact this intermixture cannot take place, except with the ſuperior and unmoved ſtrata of the atmoſphere, and theſe alone could not produce numerous clouds, much leſs copious rain; for the air of the countries into which theſe ſoutherly winds flow, muſt itſelf have flown northward, before the more ſouthern air could enter upon them.

Moreover, ſoutherly winds retain much warmth, and northerly winds are ſo much colder in the countries into which they are introduced, that their temperature cannot be ſuppoſed ſufficiently altered to depoſit much vapour in the one caſe, or diſſolve much of that already condenſed in the other; on the contrary, the warm ſoutherly wind ſhould diſſolve the clouds already formed, and the northerly, by their encreaſed cold, ſhould produce many more.

Hence electrical agency muſt of neceſſity be recurred to, though I do not doubt but it may be more correctly applied by perſons better verſed in electrical knowledge than I can pretend to be. Currents of air flowing in different directions at different heights in the atmoſphere, muſt undoubtedly be intimately connected with theſe effects, but with theſe we are at preſent too little acquainted.

4. That a diſpoſition to rain is generally connected with a diminution of the weight of the atmoſphere, as is a diſpoſition to ſerenity with the increaſe of its weight. Becauſe under the diminiſhed weight of the atmoſphere, the eruption of vapours both from land and water is much more copious, a diſpoſition highly favorable to nubification, and the clouds already formed deſcend lower, are more concentrated, and hence more diſpoſed to react upon and attract each other and thus produce rain. The increaſed weight of the atmoſphere muſt produce oppoſite effects, and induce a diſpoſition adverſe to the production of rain.

5. That more rain falls on the ſurface of the earth than on ſmall elevations above it, as from 30 to ſome 100 feet.—This effect ſeems to me to proceed from the greater ſtillneſs and tranquillity of the air near the ſurface of the earth than at greater elevations. To prove this, it is only neceſſary to collect the rain that falls in moderate weather on both ſituations, with that which falls on both, in more ſtormy weather. If this explanation be juſt the difference between the quantities collected in both ſituations will be found greater in the latter than in the former caſe. This experiment I ſhall make, and communicate the reſult to the academy.

6. That the quantities of rain collected at the top of high mountains, and on plains about half a mile diſtant from thoſe mountains are nearly equal, but in ſummer there falls ſomewhat more on the plains, and in winter ſomewhat leſs.—The greater quantity of rain collected in ſummer on plains appears to me to proceed from the cauſe juſt mentioned, the leſt diſturbed ſtate of the atmoſphere; but the quantity of rain gained through the influence of this cauſe is often, in great meaſure, compenſated by that ariſing from the condenſation of fogs formed on the ſummits of mountains, particularly at night, when neither fog nor rain exiſt on the plains. But in winter, theſe miſts being much more frequent and denſer on the ſummits of mountains, the quantity of moiſture which they depoſit is far more conſiderable.

7. That it rains much more on the weſtern coaſts of moſt parts of Eu-

rope, particularly if mountainous, than in the interior of thoſe countries, or on the eaſtern coaſts of the Britannic iſlands.—The cauſe of theſe phænomena is very obvious. Weſterly winds are by far the moſt frequent in moſt parts of Europe; theſe flow from the Atlantic which bounds it, and generally convey marine clouds electrified differently from the ſoil or land over which they flow, as alſo from that of the higher clouds under which they reign. Hence proceeds their mutual attraction, and thence rain. This effect muſt take place principally on the weſtern coaſts; when they proceed further, this different electrical ſtate muſt either ceaſe or be diminiſhed. When the coaſts are mountainous, theſe mountains quickly abſorb the electric matter contained in the weſtern blaſts, and by colliſion, condenſe the vapours they contain, firſt into clouds, and finally into rain. Hence it often happens that weſterly winds, particularly in ſummer, produce no rain, either becauſe they introduce no clouds, or meet with none differently electrified.

8. That in ſome countries it never rains.—This ariſes from local circumſtances, as is apparent in the following inſtances: 1. It never rains on the plains of Peru from the gulf of Guyaquil, nearly under the equator, up to latitude 23° ſouth, nor is thunder ever heard there, though theſe plains border on the Pacific ocean, but they receive a ſlight dew every night. Plainly for the following reaſon: theſe plains are entirely ſandy, and, conſequently, emit very little vapour, being ſoon parched by the heat that there prevails; conſequently the intermixture of marine vapours can produce no effect. Again, the clouds in thoſe tracts are elevated to a great height, and are attracted by the electrical agency of the Cordellierres that border theſe plains, to their lofty ſummits, and there produce copious rains; hence alſo the ſandy and extenſive deſarts of Arabia and Africa are ſeldom refreſhed by rain. 2. It ſcarce ever rains in Egypt, particularly in Upper Egypt. Now it is to be obſerved, that Egypt is ſo ſituate between lofty mountains that no wind can enter it without paſſing over them, but the northerly winds, which iſſue from the Mediterranean; for a ſoutherly wind muſt paſs over the mountains of Abyſſinia; an eaſterly, over thoſe that intercede between the Red ſea and the Nile, and proceeding from the deſarts of Arabia, can bring little or no vapour; and weſterly winds muſt paſt over the deſarts of Africa and Mount Atlas. Now the northerly wind does not begin to blow until the month of June, when Egypt is ſo ſcorched as to emit ſcarce any vapour, and the few clouds it may convey are attracted by the mountains of Abyſſinia, whither this wind conveys them, and which they deluge with rain; all other winds depoſit their moiſture on the reverſe of the mountains they paſs over.

Prognoſtics of Rain.

When the barometer falls, and the hygrometer riſes, *rain* is announced.

When the barometer riſes, and the hygrometer falls, we may expect fair weather, if further changes do not appear in theſe inſtruments, as ſometimes there ſuddenly do.

If the barometer falls and the hygrometer alſo, *windy weather* will probably follow—particularly if the barometer falls much below its natural height, which in Dublin is from 29,9 to 29,98.

Again, in the morning the hygrometer is generally higher than at noon, by reaſon of the difference of temperature; but if it ſtands *lower at noon* in a greater proportion than the difference of temperature demands, it prognoſticates *fair weather*.—On the contrary, if at noon it be higher than it ſtood in the morning, *rain* may be expected. Sauſſ. Hygr. p. 356.

To foreſee the Riſe or Fall of the Barometer in the Daytime.

Obſerve it at ſeven in the morning, and afterward at nine and at ten.

If it remains ſteady, its next motion will probably be *downward*. So alſo if it falls within that interval of time, the probability is, that it will *ſink* ſtill lower. But if it riſes within that interval, the chances of a greater riſe or of a greater fall are equal.

Again, obſerve the barometer at one in the afternoon, and again at three; if it remains unmoved, it is probable that it will *riſe*, but if it has fallen, the chances of a further riſe or fall are equal.

An ACCOUNT *of the* PEARL FISHERY *in* Ceylon; *and of the* CUSTOMS *of the various* Indian Nations *who frequent the* FISHERY.

[From Mr. Percival's 'Account of the Iſland of Ceylon.']

DURING the ſeaſon of the pearl fiſhery, which begins in February, and ends about the beginning of April, the iſland of Ceylon affords no ſpectacle more ſtriking to an European than the bay and beach of Condatchy. This deſert and barren ſpot is at that time converted into a ſcene, which exceeds, in novelty and variety, almoſt any thing ever witneſſed. Several thouſands of people of different colours, countries, caſts, and occupations, continually paſſing and repaſſing in a buſy crowd: the vaſt numbers of ſmall tents and huts erected on the ſhore; with the bazar or market place before each; the multitude of boats returning in the afternoon from the pearl banks, ſome of them laden with riches; the anxious expecting countenances of the boat-owners, while the boats are approaching the ſhore, and the eagerneſs and avidity with which they run to them when arrived, in hopes of a rich cargo; the vaſt numbers of jewellers, brokers, merchants, of all colours and all deſcriptions, both natives and foreigners, who are occupied in ſome way or other with the pearls, ſome ſeparating and aſſorting them, others weighing and aſcertaining their number and value, while others are hawking them about, or drilling and boring them for future uſe: all theſe circumſtances tend to impreſs the mind with the value and importance of that object which can of itſelf create this ſcene.

The bay of Condatchy is the moſt central rendezvous for the boats employed in the fiſhery. The banks, where it is carried on, extend ſeveral miles along the coaſt from Manaar ſouthward, off Arippo, Condatchy, and Pomparipo. The principal bank is oppoſite to Condatchy, and lies out at ſea about twenty miles. The firſt ſtep, previous to the commencement of the fiſhery, is to have the different oyſter banks ſurveyed, the ſtate of the oyſters aſcertained, and a report made on the ſubject to government. If it has been found that the quantity is ſufficient, and that they are arrived at a proper degree of maturity, the particular banks to be fiſhed that year are put up for ſale to the higheſt bidder, and are uſually purchaſed by a black merchant. This, however, is not always the courſe purſued: government ſometimes judges it more advantageous to fiſh the banks on its own account, and to diſpoſe of the pearls afterward to the merchants. When this plan is adopted, boats are hired for the ſeaſon on account of government, from different quarters; the price varies conſiderably, according to circumſtances; but is uſually from five to eight hundred pagodas for each boat. There are however no ſtated prices, and the beſt bargain poſſible is made for each boat ſeparately.

As neither the ſeaſon, nor the convenience of the perſons attending, would permit the whole of the banks to be fiſhed in one year, they are divided into three or four different portions, which are fiſhed one portion annually in ſucceſſion. The different portions are completely diſtinct, and

ſet up ſeparately to ſale, each in the year in which it is to be fiſhed. By this means a ſufficient interval is given to the oyſters, to attain their proper growth; and as the portion firſt uſed has generally recovered its maturity by the time the laſt portion has been fiſhed, the fiſhery becomes almoſt regularly annual, and may thus be conſidered as yielding a yearly revenue. The oyſters are ſuppoſed to attain their completeſt ſtate of maturity in ſeven years.

The period allowed to the merchant to fiſh the banks is ſix weeks, or two months at the utmoſt; but there are ſeveral interruptions, which prevent the fiſhing days from exceeding more than about thirty. If it happens to be a very bad ſeaſon, and many ſtormy days intervene during the period allotted, the purchaſer of the fiſhery is often allowed a few days more as a favour. One conſiderable interruption proceeds from the number and diverſity of holidays obſerved by the divers of different ſects and nations who are employed. Many of the divers are of a black race, known by the name of Marawas, and inhabiting the oppoſite coaſt of Tutucoreen: theſe people, although of the Malabar caſt, are Roman catholics, and leave off work on Sundays to attend prayers at the chapel of Arippo. But if many ſtormy days, or Hindoo and Mahomedan feſtivals (which are never neglected on any account by the natives) occur to interrupt the regular courſe of fiſhing, the farmer is ſometimes deſirous that the catholic Marawas ſhould make up the loſt time by working on Sundays: but this he cannot compel them to do, without an order from the chief civil officer of government, who is appointed to ſuperintend the fiſhery.

The boats and donies employed in the fiſhery do not belong to Ceylon, but are brought from different ports of the continent; particularly Tutucoreen, Caracal, and Negapatam, on the Coromandel coaſt; and Colang, a ſmall place on the Malabar coaſt, between Cape Comorin and Anjanga. The divers from Colang are accounted the beſt, and are only rivalled by the Lubbahs, who remain on the iſland of Manaar for the purpoſe of being trained in this art. Previous to the commencement of the fiſhery, all the boats rendezvous at Condatchy; and it is here they are numbered and contracted for.

During the ſeaſon, all the boats regularly ſail and return together. A ſignal gun is fired at Arippo, about ten at night, when the whole fleet ſets ſail with the landbreeze. They reach the banks before daybreak; and at ſunriſe commence fiſhing. In this they continue buſily occupied till the ſeabreeze, which ariſes about noon, warns them to return to the bay. As ſoon as they appear within ſight, another gun is fired, and the colours hoiſted, to inform the anxious owners of their return. When the boats come to land, their cargoes are immediately taken out, as it is neceſſary to have them completely unloaded before night. Whatever may have been the ſucceſs of their boats, the owners ſeldom wear the looks of diſappointment; for, although they may have been unſucceſsful one day, they look with the moſt complete aſſurance of better fortune to the next; as the Brahmins and conjurers, whom they implicitly truſt in defiance of all experience, underſtand too well the liberality of a man in hopes of good fortune, not to promiſe them all they can deſire.

Each of the boats carries twenty men, with a *tindal* or chief boatman, who acts as pilot. Ten of the men row and aſſiſt the divers in aſcending. The other ten are divers; they go down into the ſea by five at a time; when the firſt five come up the other five go down, and by this method of alternately diving, they give each other time to recruit themſelves for a freſh plunge.

In order to accelerate the deſcent of the divers, large ſtones are employed: five of theſe are brought in

each boat for the purpoſe; they are of a reddiſh granite, common in this country, and of a pyramidal ſhape, round at top and bottom, with a hole perforated through the ſmaller end ſufficient to admit a rope. Some of the divers uſe a ſtone ſhaped like a half-moon, which they faſten round the belly when they mean to deſcend, and thus keep their feet free.

Theſe people are accuſtomed to dive from their very infancy, and fearleſsly deſcend to the bottom in from four to ten fathom water, in ſearch of the oyſters. The diver, when he is about to plunge, ſeizes the rope, to which one of the ſtones we have deſcribed is attached, with the toes of his right foot, while he takes hold of a bag of network with thoſe of his left; it being cuſtomary among all the Indians to uſe their toes in working or holding as well as their fingers, and ſuch is the power of habit that they can pick up even the ſmalleſt thing from the ground with their toes as nimbly as an European could with his fingers. The diver thus prepared, ſeizes another rope with his right hand, and holding his noſtrils ſhut with the left, plunges into the water, and by the aſſiſtance of the ſtone ſpeedily reaches the bottom. He then hangs the net round his neck, and with much dexterity, and all poſſible diſpatch, collects as many oyſters as he can while he is able to remain under water, which is uſually about two minutes. He then reſumes his former poſition, makes a ſignal to thoſe above by pulling the rope in his right hand, and is immediately by this means drawn up and brought into the boat, leaving the ſtone to be pulled up afterward by the rope attached to it.

The exertion undergone during this proceſs is ſo violent, that upon being brought into the boat, the divers diſcharge water from their mouth, ears, and noſtrils, and frequently even blood. But this does not hinder them from going down again in their turn. They will often make from forty to fifty plunges in one day; and at each plunge bring up about a hundred oyſters. Some rub their bodies over with oil, and ſtuff their ears and noſes to prevent the water from entering; while others uſe no precautions whatever. Although the uſual time of remaining under water does not much exceed two minutes, yet there are inſtances known of divers who could remain four and even five minutes. The longeſt inſtance ever known was that of a diver who came from Anjango in 1797, and who abſolutely remained under water full ſix minutes.

This buſineſs of a diver, which appears ſo extraordinary and full of danger to an European, becomes quite familiar to an Indian, owing to the natural ſuppleneſs of his limbs, and his habits from his infancy. His chief terror and riſque ariſe from falling in with the groundſhark while at the bottom. This animal is a common and terrible inhabitant of all the ſeas in theſe latitudes, and is a ſource of perpetual uneaſineſs to the adventurous Indian. Some of the divers, however, are ſo ſkilful as to avoid the ſkark even when they remain under water for a conſiderable time. But the terrors of this foe are ſo continually before their eyes, and the uncertainty of eſcaping him ſo great, that theſe ſuperſtitious people ſeek for ſafety in ſupernatural means. Before they begin diving, the prieſt, or conjurer, is always conſulted, and whatever he ſays to them is received with the moſt implicit confidence. The preparation which he enjoins them conſiſts of certain ceremonies according to the caſt and ſect to which they belong, and on the exact performance of theſe they lay the greateſt ſtreſs. Their belief in the efficacy of theſe ſuperſtitious rites can never be removed, however different the event may be from the predictions of their deluders: government therefore wiſely gives way to their prejudices, and always keeps in pay ſome conjurers, to attend the divers and remove their fears.

For though theſe people are ſo ſkilful and ſo much maſters of their art, yet they will not on any account deſcend till the conjurer has performed his ceremonies. His advices are religiouſly obſerved, and generally have a tendency to preſerve the health of the devotee. The diver is uſually enjoined to abſtain from eating before he goes to plunge, and to bathe himſelf in freſh water immediately after his return from the labours of the day.

The conjurers are known in the Malabar language by the name of *Pillal Karras*, or *binders of ſharks*. During the time of the fiſhery, they ſtand on the ſhore from the morning till the boats return in the afternoon, all the while muttering and mumbling prayers, diſtorting their bodies into various ſtrange attitudes, and performing ceremonies to which no one, not even themſelves I believe, can attach any meaning. All this while it is neceſſary for them to abſtain from food or drink, otherwiſe their prayers would be of no avail. Theſe acts of abſtinence, however, they ſometimes diſpenſe with, and regale themſelves with *toddy*, a ſpecies of liquor diſtilled from the palm-tree, till they are no longer able to ſtand at their devotions.

Some of the conjurers frequently go in the boats with the divers, who are greatly delighted at the idea of having their protectors along with them; but in my opinion, this fancied protection renders the divers more liable to accidents, as it induces them to venture too much and without proper precautions, in full confidence of the infallible power of their guardians. It muſt not however be imagined, that theſe conjurers are altogether the dupes of their own arts, or that they accompany their votaries to the fiſhery merely from an anxious care of their ſafety; their principal purpoſe in going thither is, if poſſible, to filch a valuable pearl. As this is the caſe, it is evident that the ſuperintendant of the fiſhery muſt look upon their voyages with a jealous eye; ſuch, however, is the devoted attachment of their votaries, that he is obliged to paſs it over in ſilence, or at leaſt to conceal his ſuſpicions of their real intentions. He muſt alſo never hint a doubt of their power over the ſharks, as this might render the divers ſcrupulous of committing themſelves to the deep, or indeed deter them from fiſhing at all. The conjurers reap here a rich harveſt, for beſide being paid by the government, they get money and preſents of all ſorts from the black merchants and thoſe ſucceſsful in fiſhing up the oyſters.

The addreſs of theſe fellows in redeeming their credit, when any untoward accident happens to falſify their predictions, deſerves to be noticed. Since the iſland came into our poſſeſſion, a diver at the fiſhery one year loſt his leg, upon which the head conjurer was called to account for the diſaſter. His anſwer gives the moſt ſtriking picture of the knowledge and capacity of the people he had to deal with. He gravely told them, 'that an old witch who owed him a grudge, had juſt come from Colang on the Malabar coaſt, and effected a counter-conjuration, which for the time rendered his ſpells fruitleſs; that this had come to his knowledge too late to prevent the accident which had happened, but that he would now ſhow his own ſuperiority over his antagoniſt by enchanting the ſharks and binding up their mouths, ſo that no more accidents ſhould happen during the ſeaſon.' Fortunately for the conjurer the event anſwered his prediction, and no further damage was ſuſtained from the ſharks during the fiſhery of that year. The appearance of a ſingle ſhark is indeed ſufficient to ſpread diſmay among the whole body of divers; for as ſoon as one of them ſees a ſhark he inſtantly gives the alarm to his companions, who as quickly communicate it to the other boats; a panic ſpeedily ſeizes the whole, and they often return to the bay without fiſhing any more for that day. The ſharks which create all this alarm ſometimes

turn out to be nothing more than a ſharp ſtone on which the divers happen to alight. As falſe alarms excited in this manner prove very injurious to the progreſs of the fiſhery, every means is employed to aſcertain whether they are well or ill founded; and if the latter be the caſe, the authors of them are puniſhed.

The divers are paid differently according to their private agreement with the boat-owners. They are paid either in money, or with a proportion of the oyſters caught, which they take the chance of opening on their own account; the latter is the method moſt commonly adopted. The agreements with the people who hire out the boats are conducted much in the ſame manner. They contract either to receive a certain ſum for the uſe of their boats, or pay the chief farmer of the banks a certain ſum for permiſſion to fiſh on their own account. Some of thoſe who purſue the latter plan are very ſucceſsful and become rich; while others are great loſers by the ſpeculation. Oyſter lotteries are carried on here to a great extent; they conſiſt of purchaſing a quantity of the oyſters unopened, and running the chance of either finding or not finding pearls in them. The European officers and gentlemen, who attend here upon duty or through curioſity, are particularly fond of theſe lotteries, and very frequently make purchaſes of this ſort.

The boat-owners and merchants are very apt to loſe many of the beſt pearls while the boats are on their return to the bay from the banks, as the oyſters when alive and left for ſome time undiſturbed frequently open their ſhells of their own accord: a pearl may then be eaſily diſcovered, and the oyſter prevented by means of a bit of graſs or ſoft wood from again cloſing its ſhell, till an opportunity offers of picking out the pearl. Thoſe fellows who are employed to ſearch among the fiſh alſo commit many depredations, and even ſwallow the pearls to conceal them; when this is ſuſpected, the plan followed by the merchants is to lock the fellows up, and give them ſtrong emetics and purgatives, which have frequently the effect of diſcovering the ſtolen goods.

As ſoon as the oyſters are taken out of the boats, they are carried by the different people to whom they belong and placed in holes or pits dug in the ground to the depth of about two feet, or in ſmall ſquare places cleared and fenced round for the purpoſe; each perſon having his own ſeparate diviſions. Mats are ſpread below them to prevent the oyſters from touching the earth; and here they are left to die and rot. As ſoon as they have paſſed through a ſtate of putrefaction, and have become dry, they are eaſily opened without any danger of injuring the pearls, which might be the caſe if they were opened freſh, as at that time to do ſo requires great force. On the ſhell being opened, the oyſter is minutely examined for the pearl: it is uſual even to boil the oyſter, as the pearl, though commonly found in the ſhell, is not unfrequently contained in the body of the fiſh itſelf.

The ſtench occaſioned by the oyſters being left to putrefy is intolerable; and remains for a long while after the fiſhery is over. It corrupts the atmoſphere for ſeveral miles round Condatchy, and renders the neighbourhood of that country extremely unpleaſant till the monſoons and violent ſouthweſt winds ſet in and purify the air. The nauſeous ſmell however is not able to overcome the hopes of gain: for months after the fiſhing ſeaſon, numbers of people are to be ſeen earneſtly ſearching and poring over the ſands and places where the oyſters had been laid to putrefy; and ſome are now and then fortunate enough to find a pearl that amply compenſates their trouble in ſearching after them.

The pearls found at this fiſhery are of a whiter colour than thoſe got in the gulf of Ormus on the Arabian coaſt, but in other reſpects are not accounted ſo pure or of ſuch an excellent quality;

for though the white pearls are more eſteemed in Europe, the natives prefer thoſe of a yellowiſh or golden caſt. Off Tutucoreen, which lies on the Coromandel coaſt, nearly oppoſite to Condatchy, there is another fiſhery; but the pearls found there are much inferior to thoſe two ſpecies juſt mentioned, being tainted with a blue or grayiſh tinge.

In preparing the pearls, particularly in drilling and ſtringing them, the black people are wonderfully expert. The inſtrument they employ in drilling, is a machine made of wood, in ſhape reſembling an obtuſe inverted cone, about ſix inches in length and four in breadth, ſupported upon three feet, each twelve inches long. In the upper flat ſurface of this machine, holes or pits are formed to receive the larger pearls, the ſmaller ones being beat in with a little wooden hammer. The drilling inſtruments are ſpindles of various ſizes according to that of the pearls; they are turned round in a wooden head by means of a bow handle to which they are attached. The pearls being placed in the holes or pits, and the point of the ſpindle adjuſted to them, the workman preſſes on the wooden head of the machine with his left hand, while his right is employed in turning round the bow handle. During the proceſs of drilling, he occaſionally moiſtens the pearl by dipping the little finger of his right hand in a cocoa-nut filled with water which is placed by him for that purpoſe; this he does with a dexterity and quickneſs which ſcarcely impedes the operation, and can only be acquired by much practice.

They have alſo a variety of other inſtruments, both for cutting and drilling the pearls. To clean, round, and poliſh them to that ſtate in which we ſee them, a powder made of the pearls themſelves is employed. Theſe different operations in preparing the pearls occupy a great number of the black men in various part of the iſland. In the black town or pettah of Columbo in particular, many of them may every day be ſeen at this work.

The pearl fiſhery, owing to its having been formerly inconſiderately exhauſted by the avarice of the Dutch, is not perhaps ſo productive as it once was. The revenue which government derives from it is ſtill however conſiderable, and may by good management be increaſed. Pearls are conſidered as the next ſtaple of the iſland to cinnamon; the concourſe of people which it attracts affords a facility for diſpoſing of the other produce; and by proper management, advantage might be taken of the opportunity here offered to introduce our manufactures into various parts of India.

Before we leave the bay of Condatchy, it may be amuſing to take a view of the various objects which moſt attract the attention of a ſtranger during the pearl fiſhery. The remarkable diſplay of Indian manners, which are here ſeen in all their varieties, is, perhaps, the moſt ſtriking of theſe. Every caſt has its repreſentatives; the arts practiſed by ſome, the ceremonies performed by others, and the appearance of all, preſent the richeſt repaſt to the curioſity of an European. In one place he may ſee jugglers and vagabonds of every deſcription practiſing their tricks with a degree of ſuppleneſs and ſkill, which appear ſupernatural to the inhabitant of a cold climate; in another he may obſerve Fakeers, Brahmins, Prieſts, Pandarams, and devotees of every ſect, either in order to extort charity, or in conſequence of ſome vow, going through the moſt painful operations with a degree of obſtinate reſolution, which no one could ſcarcely believe or even conceive without being an eyewitneſs.

The moſt painful acts of penance which the Indians undergo, are in order to regain their caſt, when they have loſt it either by eating things forbidden by the rules of their ſect, or by having ſuch connection with people of a different deſcription as is ſuppoſed to defile them. In this ſtate

they are held in abhorrence by perſons of their own ſect, debarred from all intercourſe with them, and prohibited even to touch them. From ſuch a dreadful ſtate of defilement they can be purified only by paying a large ſum of money, or by undergoing the moſt incredible penances. Among thoſe which I obſerved, I ſhall mention a few of the moſt remarkable. One of them will vow to hold his arm elevated over his head for a certain number of years, without once letting it down; and this he will actually continue to do, till the arm can never afterward be recovered to its natural poſition. Another will keep his hand ſhut till the nails on his fingers abſolutely grow into the fleſh, and appear quite through at the back of his hand. Many never ſuffer their hair to be combed, or their beards to be ſhaved: in this ſtate the hair of their heads, which is of a brown or burnt colour, gets matted, and appears not unlike the mops we uſe in Europe; or hangs down in long diſhevelled ſtrings, ſimilar to that which grows on a ſpecies of French lapdogs. Some will vow never to lie down; while, at the ſame time, they wear round their necks a large iron inſtrument not unlike a gird-iron without a handle.

But one of the moſt extraordinary of theſe ceremonies is, ſwinging for their caſt, as it is termed, and is by no means unfrequent. A very high and ſtrong poſt, or cocoa-tree, is planted firmly in the ground; on its top, another beam is placed croſswiſe, to turn round on a pivot; and from the end of the tranſverſe beam, ropes and pullies are ſuſpended to hoiſt up the devotee. He then is brought out, attended by a number of people dancing before him; and is led thrice round the ſwinging poſt by the Brahmins and his relations, with loud ſhouts, accompanied by muſic. In the mean time a ſheep is ſacrificed, and the blood ſprinkled about on the ſurrounding multitude, who are eager that it ſhall fall upon them. Barren women, in particular, are anxious to catch the drops, in hopes of being by this means rendered fruitful; and with a view to ſecure the efficacy of this charm, they contrive to work themſelves up, during the ceremony, to the higheſt pitch of religious delirium, tearing their hair and ſhrieking in the moſt dreadful manner. After the ſacrifice is performed, the devotee is placed on his belly flat on the ground; and two very large hooks, which have been previouſly fixed to the ropes ſuſpended from the end of the croſs-beam, are inſerted deep into the fleſh of his back juſt under the ſhoulders: other ropes are alſo placed under his breaſt and acroſs his thighs, to help to ſuſtain the weight of his body. He is then, by means of the ropes and pullies, hoiſted up to the croſs tree, immediately under which he continues ſuſpended; and in this poſition he is drawn round the poſt two or three times. During this painful ceremony he repeats a certain number of prayers, and continues to throw among the crowd flowers which he had taken up with him for the purpoſe: theſe are conſidered as ſacred relics, which will keep away all diſeaſe, and enſure happineſs ever after; and the ſurrounding multitude ſcramble for them as eagerly as an Engliſh mob for money thrown among them.

The prieſts who attend at Condatchy on account of theſe and other ceremonies, as well as many other ſects of religious mendicants, are a great nuiſance there; for, beſide being exceedingly lazy and idle, they are likewiſe very impudent and troubleſome. But they are not the only peſts which annoy the multitudes collected at the pearl fiſhery. There are beſide a crowd of jugglers, ſnake-catchers, dancing boys and girls of all deſcriptions, as well as many who follow no other occupation but to procure their livelihood by the arts of filching and thieving, at which they are exceedingly dexterous. This practice, however, is the more pardonable in them, as it appears to be an inherent propenſity in an Indian. In their deal-

ings with an European, whenever an opportunity preſents itſelf, they never fail to employ their ſkill in overreaching him. It is only however by pilfering and ſtealing that he ſuffers from them, for they hardly ever venture to rob or take his goods from him by open force. So great, indeed, is the awe which the achievements of the Europeans have inſpired into the natives of India, that a black man is ſcarcely ever known to meet a white man hand to hand, either in private conflict or in battle.

There is no ſcene at which the native Indians can have a finer opportunity of turning their dexterity to account, than the bay of Condatchy, at the ſeaſon of the pearl fiſhery. For this reaſon, rogues flock thither from all parts of India, and no precaution is ſufficient to prevent their depredations. Their practice of picking out the pearls from the oyſters and ſecreting them is, in particular, carried to a great height, and it has been found impoſſible to put a ſtop to it. In this general cenſure of the natives of India, we do not include the native Ceyloneſe; for, although the pearl fiſhery be carried on in their iſland, yet few of them attend it, in compariſon of the numbers who flock from other parts of India. Nor are they at all ſo much addicted to roguery, nor equal in ſlight of hand, to the Indians of the continent, who ſeem to have theſe accompliſhments by inheritance, and are very proud of them.

At Condatchy their depredations are reduced to a ſyſtem, and no precautions can entirely guard againſt them. The boat-owners and merchants dealing in the oyſters, are obliged to hire people to collect the pearls out of them; and to prevent embezzling, confidential perſons are appointed, who conſtantly attend to watch over and obſerve them.

OBSERVATIONS *on the* NECESSSITY *of* IMMERSING SEED *in* WATER *in* TIMES *of* DROUGHT. *By Ant.* Alexis Cadet-de-Vaux.

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Franconville-la-Garenne,
2 Brumaire (Oct. 23.)

TO reap, we muſt ſow; and, from the drought which has prevailed for ſix months, ſowing is not eaſy, for our gardens are no longer cultivated with the ſpade and the harrow, but with the mattock and the pick-ax; the plough, however, on account of its ſtrength, can ſtill be employed to till the ground, except in compact lands, and thoſe which are ſtiffly bound. But it is not enough that the land ſhall have been tilled to enable us to ſow it, the ſeed muſt alſo germinate, without which it dries and periſhes, or becomes the food of animals and inſects. For without rain, or dew which moiſtens at leaſt the ſurface of the ſoil, there can be no germination. In the mean time the ſeaſon advances, and the ſeed-time is already late. Let us point out, then, to the huſbandman, a method of preventing the inconvenience of drought: it is, not to commit his ſeed to the earth, until it is impregnated with the moiſture neceſſary for its germination.

We may refer to a great example: the Chineſe do not depoſit a ſingle ſeed in the earth until it has been immerſed in water. And I will adduce an experiment nearer home, which is in favour of this practice. Five years ago, I ſowed half an acre (*arpent*) of land with wild ſuccory, lucerne, and pimpernel. With a view to compare the produce of theſe plants, I ſowed them in rows two feet aſunder. The ſpring was very dry, and I ſoaked each of the ſeeds in water for forty-eight hours. The quantity ſoaked was not ſufficient; for there was required as much more as to ſow nine rows, three of each kind. I took advantage of this circumſtance to com-

pare the effect ariſing from the ſeed being prepared or not prepared by immerſion. The reſult was, that in the nine rows ſowed with the dry ſeed not more than thirty plants came up in five months; while the remainder of the land was covered, and formed a moſt beautiful artificial meadow. The rain fell too late to ſow theſe nine rows, and it was neceſſary to ſow them again in autumn.

Let us now apply theſe facts to the ſowing of corn.

The huſbandman is in the habit of liming his wheat when he apprehends the rot. This year he has no need to dread that evil; nevertheleſs let him uſe the lime, but by immerſion; for in general the method of application is defective. The operation is uſually confined to a ſimple ſprinkling of the heap of wheat with lime-water, while it is turned over with a ſhovel.

The good, the only way of liming, is by immerſion: put the ſeed into tubs, and cover it to the height of four or five fingers breadth with lime-water, made ſo hot that the hand cannot be kept in it without difficulty; cover it up, ſtirring it three or four times in the twenty four hours; after which draw out the bung, that the water may run off, the quantity will be but ſmall; it will be nearly all abſorbed by the grain, which muſt be taken from the tubs, ſpread out in the air, and then ſowed.

Twelve buſhels of wheat, immerſed for twenty-four hours, will abſorb nearly one-fourth of water, that is to ſay, they will ſwell to fifteen or ſixteen buſhels by meaſure. Let us now inveſtigate the theory. Every grain of this corn carries with it to the earth a quantity of water, more than ſufficient to enſure its germination. This water acts principally upon the extractive matter of the huſk; it diſſolves this principle, one of the properties of which is to attract and ſtrongly to retain moiſture. Hence this water will not be evaporated. If, inſtead of pure water, we uſe dunghil-water, which is ſaturated with this extractive matter, together with deliqueſcent ſalts, and fatty matter, then the moſt minute quantities of ſurrounding humidity will be attracted toward the grain. But in truth it will, after this treatment, ſucceed very well without the ſpeedy aſſiſtance of the rains and dews; it poſſeſſes a ſufficiency of moiſture to put forth its germ, to throw out its radical, and in ſhort, to ſecure its germination. The grain that has been ſteeped gains, in ordinary ſeaſons, from twelve to ſixteen days in advance before that which has not been ſteeped; and in times of exceſſive drought, it gains every thing. If ſteeped, it germinates and grows; and if not ſteeped, it dries and periſhes. Let the rains come, let them continue, ſtill I adviſe immerſion; which, by forwarding the germination, remedies the inconveniencies of a late ſeed-time.

REMARKS *on the* STATE *of* LITERATURE *and* SCIENCE *during the* FRENCH REVOLUTION: *Continued from Page* 354.

A SHORT time after the death of Newton, the phenomena of electricity were multiplied by the experiments of Gray and Dufay, and the aſtoniſhing effects of the Leyden phial were diſcovered. The report of theſe experiments reached America, a region of imperfect cultivation, but which had already produced a man, whoſe wiſdom and calmneſs of ſoul rendered him equally capable of obſerving nature, and civilizing that immenſe country. Franklin, having procured from England an electrical machine, continued to examine the new phenomena of electricity. He accounted for theſe by the oppoſite actions of two electricities, the combination of which forms the natural ſtate of bodies. He diſcovered the power of points, and explained the Leyden experiment; and being guided by the ſtriking analogy that ſubſiſts between lightning and electric matter, he proved and

proclaimed their identity. This diſcovery was the origin of conductors. Epinus explained and rectified the doctrine of Franklin in a work, in which calculation and experiment are combined. It now remained to determine the law by which the repulſive force of the electric matter varies with the diſtance, and this object was attained by an apparatus of wonderful ſimplicity and exactneſs. The law of theſe phenomena was extended to magnetic attractions, and was found to be the ſame with the gravitation obſerved in the celeſtial ſpaces. A ſhort time after, an experiment was made in France, ſtill bolder than that of Franklin. Montgolfier invented the air balloon; and man, to whom Nature has refuſed wings, ventured to examine her phenomena in the boſom of the clouds and ſtorms. While theſe experiments aſtoniſhed Europe, a diſcovery was made in a remote corner of Italy, to which, at that time, little attention was paid, but which, at the preſent period, is conſidered as connected with the important phenomena of life and death. A ſtudent of medicine at Bologna, in the year 1789, being employed in diſſecting a live mouſe, and holding it down firmly with one hand, touched, with the other, one of its nerves with the ſcalpel, and immediately felt an electric ſhock. Nothing is neglected which illuſtrates the ſciences, and this ſingle fact has been the ſource of the moſt wonderful reſults. About this period, chemiſtry experienced one of thoſe revolutions which renovate the ſciences; revolutions worthy to fix the attention of the philoſopher, becauſe they are unattended with bloodſhed, and exhibit, by progreſſive efforts, the moſt remarkable movements of the human mind. Till the ſeventeenth century, chemiſtry was only a collection of ſeparate facts, or of ſecret proceſſes. Stahl appeared, and reduced it to a ſcience. He connected the known phenomena under the ſingle hypotheſis of phlogiſton, or fire combined. But one day is ſufficient to overturn viſionary ſyſtems, and time confirms only the ſtedfaſt laws of nature. Theory gives birth to diſcuſſion, and the examination of facts. By obſerving thoſe facts with more diligence, it was found that many concomitant circumſtances had been neglected, and inadvertently paſſed by. It was likewiſe demonſtrated, that the elaſtic fluids, which evaporate in an infinite number of experiments, and which Stahl, without inveſtigation, conſidered to be common air, were in reality ſubſtances of great diverſity, and unconnected with each other. This diſcovery introduced the ſtudy of the influence and effect of theſe ſubſtances, and, by a correct analyſis, a multitude of facts were brought to light, totally inexplicable by the doctrine of phlogiſton. There was living at this period, a man who poſſeſſed, along with an independent fortune, two qualities, generally ſuppoſed incompatible, which are, genius, which generalizes, and an exact judgment, which ſcrutinizes the details and minute circumſtances. This man was Lavoiſier, who, forſaking ſecondary phenomena, attached himſelf to the moſt important of all, to that of combuſtion. He rigorouſly inſpected and examined every object of diſcuſſion, and was the firſt that proved that the augmentation of the weight of metals during calcination, was to be aſcribed to a portion of atmoſpheric air which was combined with them. Lavoiſier made it evident, that this abſorbed element was more reſpirable than common air; he proved that it is one of the conſtituent principles of that air which was hitherto conſidered as a ſimple body. Having explored the nature and action of theſe inviſible matters, with as much preciſion as if they were tangible and viſible, he was inſenſibly conducted to an infinite variety of diſcoveries, intimately connected with each other. At laſt he made his important experiment on the decompoſition of water, which was the finiſhing point of his theory, that is at preſent

adopted by all Europe, under the name of the French pneumatic doctrine. The labours of Lavoiſier, and other French chemiſts who ſeconded his efforts, not only changed the ſtate of this ſcience, but beſtowed on it alſo a new career, and an appropriate logic and rationale. The learned world generally felt the neceſſity of exact experiment and of rigorous reaſoning. Perhaps the chemiſts were indebted for this beneficial reform to their intercourſe with mathematicians, whoſe aſſiſtance they invoked when preciſion and method were requiſite in their labours. Mathematicians, in like manner, began to cultivate natural ſcience, and diſcover in it a ſubject for the fineſt application of their reaſonings. This mutual exchange of intellect is a certain evidence of the improvement of the ſciences, and a ſecurity for their future extenſion: it has furniſhed chemiſtry with the true theory of heat, and the firſt exact inſtrument that has been applied to meaſure it. In the origin of the ſciences, all facts appear as principals; in their further progreſs, certain connections and relations are diſcovered; and at laſt, when the object of inveſtigation becomes ſuſceptible of exact method, a moment arrives when every thing that was before general becomes particular, and branches out into a ſeparate number of fundamental principles. From theſe elevated points, the deſcent into details is without difficulty, and the paſſage ſimple and natural. If, therefore, thoſe points of departure be adjuſted with appropriate ſigns, and the dependance and connection between the objects of the ſciences ſhall be expreſſed by modifications of theſe ſigns, we ſhall have a philoſophical language adapted to that branch, in which analogy is preſerved, and which by the ſame means may be transferred to other ſubjects of profound inveſtigation. In this manner have learned Frenchmen formed a nomenclature for the ſcience of chemiſtry. Though the increaſe of diſcoveries rendered this new language indiſpenſible, the idea of its benefits was the reſult of a cultivated philoſophy, and literary talents, as well as chemical knowledge, were neceſſary for its formation. If the improvement of philoſophy has powerfully contributed to the progreſs of ſcience, as far as it regards the phenomena of nature, its influence muſt have been more ſenſibly felt in mathematical learning, in which method is every thing; an effect which has accordingly taken place. The treatiſes which have deſcended to us from the ancients, repreſent their views totally confined to the ſimple elements of ſcience. Their genius was confined in a narrow circle, beyond which they were not allowed to paſs. On examining the cauſes of this reſtraint on men of ſuch rare talents, we muſt be convinced that the imperfection of their method was the chief impediment to their progreſs. The ſynthetical method, which they adopted, proceeds from known truths to the queſtion propoſed to be ſolved; and, as all truths are not equally connected with each other, it is only by a ſort of intuition they arrive at the ſolution. Beſides, the ſolution itſelf muſt not be far removed from the ſurface, elſe their labour will be uſeleſs; and accordingly, the progreſs of ſcience, when ſhackled by this ſpecies of method, muſt neceſſarily have been very ſlow and embarraſſed. The moderns proceed in a direct contrary method; they ſet out with the matter in queſtion as granted, in order to arrive at the common centre of acknowledged truths. This inverted method conſtitutes the mathematical analyſis, which is as rigorous as the ſynthetical method, and more direct and rapid in its progreſs. To it we are indebted for the beſt part of the diſcoveries made in modern times. Of all the applications of ſcience, the nobleſt is that which inveſtigates the laws that regulate the ſyſtem of the univerſe. The mind, in order to comprehend ſuch a diverſity of relations, muſt be provided with a ſafe and ſure method,

to enable it to follow them with ſteadineſs and reſolution, to pierce through the concatenation of effects, and draw aſide the veils with which nature encircles her myſterious operations. It is on ſuch occaſion that analyſis is indiſpenſible, and from this neceſſity its improvement has been derived. By the aid of this invaluable inſtrument, three centuries have been ſufficient to diſcover and aſcertain the celeſtial phenomena. It is to Copernicus we muſt refer the origin of theſe inveſtigations. Inſpired by the writings of the ancient philoſophers, he revived their ſyſtem, placed the ſun in the centre of the univerſe; put the planets, and the earth itſelf, in motion round that luminary, and reduced the diurnal revolution of the heavens to a ſimple illuſion produced by the rotation of the globe. All the aſtronomical phenomena naturally accommodated themſelves to this arrangement, which is as ſimple as nature and truth itſelf. But Copernicus, that he might not ſhock the prejudices of his own age, preſented his ſyſtem as an hypotheſis purely mathematical; and his death, which happened ſhortly after, prevented the perſecution to which he muſt inevitably have been expoſed. His ſentiments were not generally adopted at their firſt promulgation; but in conſequence of the diſcoveries of Galileo reſpecting the ſatellites of Jupiter, and the movements of Venus round the Sun, they roſe gradually into eſtimation. The phaſes of Venus, its eclipſes, its periodical returns, were naturally applied to the earth. The analogy was ſtriking; but the motion of this planet was contradictory to ſome paſſages in Scripture. On theſe grounds, Galileo, at the age of 70, was ſummoned before the tribunal of the Inquiſition, and condemned to impriſonment for life on a charge of hereſy. At this time Kepler diſcovered and publiſhed the fundamental laws of the motions of the heavenly bodies. Theſe, however, were truths very different from thoſe advanced by Galileo; they were too abſtract, and too much incumbered with calculations, to make numerous partizans. Truth is always attacked with ſucceſs at its birth, but when it has grown to its magnitude, it eſcapes at once from the vulgar, and from its perſecutors.

In the mean time, the progreſs of analyſis kept pace with that of experiment and obſervation. This epoch is famous in the hiſtory of ſcience for the invention of logarithms, an admirable contrivance, which, by abridging calculation, prolong in a manner the life of the aſtronomer, as the teleſcope had enlarged his ſight. Algebra, which is an analytical combination of numbers, independent of their particular value, had been conſiderably improved when Deſcartes appeared; but it had been employed for determinate queſtions only, that is, for the diſcovery of quantities, the number and value of which is limited. Deſcartes, by a new abſtraction, employed it to expreſs the law according to which the value of variable quantities ſucceed each other, which has given riſe to the calculation of curves, and the application of algebra to unlimited problems in geometry. General propoſitions are produced by means of abſtraction; and abſtraction has advanced in a high degree the phyſical and mathematical ſciences. It promoted the general impulſe which the inventive genius of Deſcartes had imparted to philoſophy. Perhaps he might have derived more advantage from the inſtrument which he had invented, but his impatient genius ſeemed leſs to follow nature than to anticipate her; and the ideas of Copernicus, and the laws of Kepler, which contain the true key of the planetary ſyſtem, became uſeleſs in his hands. Huygens, who was acquainted with his labours, did not perceive their real uſe and benefit, but he made himſelf illuſtrious by other diſcoveries. He applied the pendulum to clocks, explained the appearance of Saturn's ring, and unfolded the laws of motion. At laſt, New-

ton appeared, and ſcience completed its triumphs. Quantity in its moſt minute modifications was ſtudied, and its nature expreſſed by more general characters, which prepared the diſcovery of the differential calculus made at once by Leibnitz and Newton. An incident of this nature ought not to ſurpriſe us; great diſcoveries are introduced by the increaſe of knowledge, and are, as it were, inevitable. Men of genius who outſtrip the progreſs of their own times, are borne away to the improvement of knowledge by the general movement in which they participate. From this period, ſcience is no longer to be conſidered as a collection of inſipid details. Newton eſtabliſhed the law of univerſal gravitation. By following this ſingle principle, the ſyſtem of the world has been explained, the grand phenomena which it exhibits have been calculated, and natural philoſophy is fixed on an unalterable baſis. The impulſe which Newton imparted in every direction around him, was ſome time in propagating itſelf through the reſt of Europe. The obſtacles which Galileo experienced, when he propoſed the hypotheſis of the earth's motion, were likewiſe raiſed againſt the law of gravitation. But ignorance, on this occaſion, attacked without the power of perſecution, and time confirmed the triumph of truth. The riches which Newton left behind him, were conſiderably augmented. Long and diſtant voyages have been undertaken to diſcover and meaſure the figure of the earth. The motions of the moon have been calculated with wonderful preciſion. In the flattening of the earth, the cauſe of the proceſſion of the equinoxes has been diſcovered, and likewiſe the cauſe of the nutation of the axis of the earth, which had been proved by former obſervation. The calculation of partial differences and variations has been prevented. The motion of light, combined with that of the earth, has explained the cauſe of the aberration of the ſtars. In addition to theſe, at the epoch of the revolution, the principles of analytical mechanics were eſtabliſhed; the calculation of probabilities had been conſiderably extended, and all the known phenomena of the mundane ſyſtem, even thoſe which their long periods ſeemed to withdraw from modern obſervations, were explained and ſubjected to rigorous laws of calculation and of reaſon. A new planet had been obſerved, which confirmed in the moſt ſtriking manner the Newtonian theory; and, that nothing might be wanting to the glory of aſtronomy, an eloquent writer had written the hiſtory of that ſcience. Such has been the progreſs of the human mind in the phyſical and mathematical ſciences. Two diſtinct periods are diſcernible in this claſſification; the one prior, and the other poſterior, to the revival of letters in the weſt. In the firſt, which comprehends all antiquity, philoſophers invented vaſt ſyſtems, the truth of which they afterward laboured to demonſtrate: nothing is calculated, nothing is exactly meaſured. Some treatiſes were compoſed by men of genius, which contain the aſſemblage of acknowledged deductions, and no methods of advancement, or ſucceſsful inveſtigation. Facts and phenomena are collected and obſerved, but always with particular views, and without the idea of founding on ſuch grounds a ſyſtem of natural philoſophy. To conclude, ſome details are in exiſtence, but any general view of ſcience is not to be found. In the ſecond period, which compriſes modern times, facts are employed leſs for their immediate application than for unfolding the truths which may be drawn from them. From theſe facts we paſs to their moſt ſimple conſequences, which are only enunciations of the former. From theſe again we advance to more extenſive poſitions, until we proceed, by inſenſible degrees, to the moſt abſtract generalities. Method is an induction inceſſantly verified by experience. It fur-

niſhes the human underſtanding, not with wings to bewilder it in its flights, but with reins that direct and curb its exertions. The ſciences being united by this common philoſophy, advance together abreaſt; the ſteps which each of them ſeparately makes, ſerve to bring forward all the reſt. Their progreſſive movement, in this method, is at once profitable and ſure; and will continue to increaſe with irreſiſtible momentum, ſince, in order to arreſt its progreſs, the utter and ſpeedy annihilation of human knowledge muſt take place, a dreadful misfortune, from which the diſcovery of printing has inſured us for ever. When a traveller, in the middle of a gloomy night, bewildered in a ſavage country, advances with difficulty through a thouſand dangers, and finds himſelf at laſt on the ſummit of a lofty mountain, which commands a vaſt horizon; if the ſun ſhould then appear, and diſcloſe to his eyes a fertile country, and an agreeable road for the remainder of his journey, tranſported with joy, he would proceed to his direction, and diſmiſs the vain phantoms and terrors of the night. So let us, under the clear light of philoſophy, let us forget the chimerical and ſuperſtitious horrors of the returns of ignorance, and advance with a firm pace in the immenſe career which is henceforth opened to the human mind. The men of letters, who had raiſed the edifice of human knowledge to ſuch a point of grandeur and perfection, enjoyed the well earned conſideration which was due to their labours. Their ſociety was ſought, their writings were admired, and their good opinion courted with the ardour of zeal. Being courageous enough to adviſe what was good, they had ſometimes ſufficient credit to repair the effects of evil. Some of them, being poſſeſſed of a large fortune, employed it in the cultivation of the arts and ſciences: others, whoſe talents had raiſed them from the humble ſtate in which fortune had placed them, although not equal in wealth, were not leſs eſteemed, nor leſs favourably received: in this reſpect, it ſeemed that merit had confounded and levelled the different ranks of ſociety. Thoſe who were moſt diſtinguiſhed for their talents and accompliſhments, formed a ſort of academy, united by friendſhip in the boſom of the French academy. Cloſely connected together by their united labours and views, they made a common ſtock of their literary attainments, and, being elevated above the miſerable ſuggeſtions of envy and vanity, by a noble diſintereſtedneſs, the improvement and advancement of ſcience were dearer to them than their own glory, or their private ſatisfaction. Such were Condorcet, Bailly, and Lavoiſier. The two latter periſhed on the ſcaffold during the revolution, and the former poiſoned himſelf to avoid the ſame fate. A few of their friends have ſurvived, and it is they who have rekindled in France the light which had been extinguiſhed by general anarchy. But let us not anticipate the natural order of time. We are now arrived at a period big with public and private miſery: ſcarce can we find a family in France which has eſcaped unhurt during the ſhocks of the revolution. From this unhappy ſource has ariſen a complexity of intereſts, of painful recollections, of enmities not yet appeaſed, which make the hiſtory of that period an odious and a difficult taſk. Facts are altered and diſguiſed, according to the different paſſions and intereſts of men; by ſome, through a deſire of flattering, or of blackening the men in power; and by others, who having loſt all confidence in public ſpirit, ceaſe to feel any intereſt in the public welfare, which they conſider to be the fixed patrimony of factious men: but he who, having kept aloof from all parties, has not been ſoured by adverſity or ill ſucceſs, ſpeaks without friendſhip and without hatred, and recites with ſincerity both the evil and the good.

At the commencement of the revo-

lution, every mind was turned toward politics. The ſciences were ſuddenly abandoned; they had no weight in the contentions and ſtruggles which occupied and agitated the public mind. They were ſoon conſigned to oblivion; liberty was the ſubject of all writings and diſcourſes: it was imagined that orators only could ſerve her with zeal and effect; and this miſtake has been one principal cauſe of our misfortunes. The majority of men of letters continued ſimple ſpectators of the events which took place; none of them took an open part againſt the revolution, and ſome engaged in it. The latter party were men of grand and extenſive views, who were perſuaded that they found, in the renovation of the ſocial organization, the means of realizing and applying their peculiar theories. They imagined they could direct the revolution at their pleaſure, and they were hurried along in its vortex; but at that time, hopes too ſanguine were cheriſhed by all ranks and deſcriptions. If indeed the love of liberty be nothing but real or pretended extravagance, if the deſire of making men more virtuous and more happy, be nothing but a frantic chimera, ſuch errors muſt be candidly pardoned in men who ſacrificed their lives, with the perſuaſion of their truth and expediency, and underwent ſo ſevere a perſecution for their own indiſcretion. Among the grand ideas which were realized in the firſt ſtage of the revolution, we muſt reckon the adoption of a uniform ſyſtem of weights and meaſures. An outcry was raiſed in every part of France againſt the multitude of thoſe that were in uſe; even kings had attempted to aboliſh a diverſity ſo pernicious to lawful commerce, and favourable to *agiotage* and fraud; but what kings attempted in vain the conſtituent aſſembly undertook. They declared that the ſame ſtandard of weights and meaſures ſhould be eſtabliſhed in a country ſubject to the ſame ſyſtem of laws; and the academy of ſciences was charged with the taſk of providing, and preſenting the beſt method of the execution of their decree. That body propoſed to adopt the decimal diviſion, taking for fundamental unity the ten millionth part of a quarter of the terreſtrial meridian. The motive that determined them in their choice was the extreme ſimplicity of the decimal calculation, and the advantage of having a ſtandard meaſure taken from nature. This latter condition would have been accompliſhed, if they had taken for fundamental unity the length of a pendulum by ſeconds for a given latitude; but the meaſurement of an arc of the meridian, executed with the preciſion conformable to the methods and actual inſtruments, was extremely intereſting with reſpect to the theory of the earth's figure; a circumſtance which decided the academy; and if the motives which it expreſſed to the conſtituent aſſembly were not preciſely the real ones, it was becauſe ſcience has its policy as well as other departments; and, in order to ſerve mankind, we muſt conſent to deceive them. The general effervеſcence which the revolution produced, extended to the univerſities. The tocſin reſounded in the ſilent retreats; at every moment, bands of ſeditious men, in conjunction with children and women of every order and deſcription, interrupted their peaceful ſtudies, forced the youthful ſtudents to range themſelves under their odious banners, and preſented them with the moſt abominable exceſſes. Leſs would have been ſufficient to overthrow theſe decayed foundations, which were in a ſtate of ſomnolency and decrepitude, and poſſeſſed no hold on the public opinion. The colleges were ſoon deſerted, and the greater part diſcontinued their functions. The chaſm which this event produced in the public inſtruction, and the fatal effects that might be expected, alarmed the conſtituent aſſembly. A decree was paſſed, that public inſtruction ſhould not be diſcontinued for a moment, and that the

king ſhould be requeſted to order the re-eſtabliſhment of the colleges. But it was now too late, the impulſe had been given, and it was impoſſible to arreſt its progreſs. Public inſtruction, in every part of France, became ineffectual, or totally inactive; and, in a ſhort time, it was conſidered as altogether uſeleſs.

AN ACCOUNT OF JERUSALEM.

[From 'Travels in Turkey, Aſia-Minor, Syria,' &c. by W. Wittman, M. D. of the Royal Artillery.]

ON our approaching Jeruſalem, we were met by the Muſelem, or Turkiſh governor, and by the ſuperior of the Latin convent, in which we were to take up our abode. They had come out with their attendants to compliment us on our arrival, and conduct us to the city, which we reached at about half paſt five o'clock. For a conſiderable diſtance the road was occupied by great numbers of the inhabitants, who had come out to meet us, and the ſtreets were thronged in our paſſage through: ſo great was the curioſity which the arrival of Chriſtian viſitors had excited!

To the very gates of Jeruſalem the land exhibited the ſame rocky and barren appearance it had aſſumed on our entering the mountainous territory. The city itſelf ſtands on an elevated rocky ground, capable of yielding but little produce: in the vicinity, however, we ſaw ſeveral ſpots which the inhabitants had with great induſtry fertilized, by clearing away the ſtones, with which they had banked up the ſoil, to prevent it from being waſhed away, and by reſorting to every other expedient which could ſuggeſt itſelf.

This ſoil, which is a reddiſh clay, wherever it is of any depth is eſſentially of a good quality, conſequently their laborious efforts had been rewarded, in theſe partial and choſen ſpots, by an abundant produce of fruits, corn, and vegetables. The grapes which were preſented to us at our repaſts were uncommonly fine and large: at the ſeaſon of the vintage the vineyards muſt have had a pleaſing aſpect in this land of rocks and mountains.

Shortly after our arrival the governor paid a formal viſit to the general and officers, in the courſe of which he tendered to us every poſſible aſſiſtance during our ſtay at Jeruſalem. In company with three of my fellow travellers, I took up my abode in the Latin convent, while the general, Mrs. Koehler, and the two other gentlemen, eſtabliſhed their reſidence at a houſe in the vicinity.

On the following morning, after breakfaſt, we returned the governor's viſit, and were entertained with coffee, ſweetmeats, and other refreſhments. From one of the windows of his houſe we had a very pleaſing view of a Turkiſh moſque, built on the foundations of Solomon's temple: Chriſtians are prohibited from entering this moſque, in conſequence of a ſuperſtitious opinion entertained by the Turks, that if any one of them ſhould ſet his foot on the conſecrated ground on which it ſtands, the Turkiſh empire would inſtantly be at an end.

On the ſpot where the governor reſided, it is reported that Pontius Pilate dwelt; and it was there, according to traditional accounts, that Peter denied Chriſt *.

* To prevent a repetition of the words, 'it is ſaid,' 'according to traditional accounts,' &c. I ſhall in future give the reports relative to the paſſages of ſcripture to which ſuch and ſuch ſpots in the Holy Land refer as they were made to us, leaving to my readers the concluſions as to the greater or leſs probability of the accordance of the traditions, ſaid to have been handed down, with the events they are intended to illuſtrate.

Soon after our return to the general's apartment, the patriarch of the Greek church and two Armenian biſhops, attended by ſeveral prieſts, paid us a viſit, and promiſed us every attention and kindneſs during our ſtay in Jeruſalem. The patriarch informed us, that the ſix prieſts we had met on our route, and who were on their way to Ramla, had been conſtrained to undertake that journey by Mahomed Pacha. As he could not explain to himſelf why they had been thus forced away, he appeared extremely anxious about them, and begged the general to intereſt himſelf in their behalf. In the inquiries he addreſſed to us, he was deſirous to know which of the three cities, Jeruſalem, Babylon, or Rome, was the moſt ancient.

We were told by the prieſts of an extraordinary threat made by Bonaparte, namely, that ſhould he ever obtain poſſeſſion of Jeruſalem, he would plant the tree of liberty on the ſpot on which the croſs of Jeſus ſtood, and would bury the firſt French grenadier who ſhould fall in the attack in the tomb of our Saviour.

From the terrace of the convent in which we were lodged we had a fine view of the Mount of Olives, of Mount Sion, and indeed of every part of the city, the extent of which has been ſo much diminiſhed in modern times, that the circumference is reckoned not to exceed four Engliſh miles. The walls and habitations are in excellent repair, and the former are provided with ſeveral ſmall ſquare towers. Near the entrance-gate is a caſtle, denominated David's tower, the ſtones in the interior part of which are very maſſive, and apparently of great antiquity.

About two o'clock we went to the church called the church of the ſepulchre, as being built over the holy ſepulchre, in company with the ſuperior of our convent, with whom, I ſhould obſerve, we had made an arrangement to viſit Bethlem on the following morning. Eſcorted by ſeveral of the reverend fathers, we paſſed through a ſolemn and grand entrance, into a lofty and capacious building (ſomewhat leſs than a hundred paces long and not more than ſixty wide) ſupported by ſeveral very large marble pillars of the Corinthian order, and the dome of which was built of the cedar of Lebanon. Preparations having been made for our viſit to this ſanctuary, it was lighted up with more than uſual ſplendour, and had a very ſtriking and awful effect. In the centre of the building is the holy ſepulchre, which is now caſed over with marble, for its better preſervation; but for this precaution indeed it would ere this have been broken into fragments, which the pilgrims would have carried off as ſo many precious relics. The ſepulchre, we are told, was firſt a cave hewn in the rock, under ground; but the rock having been ſince cut away in every direction it appears now in the form of a grotto above ground. In beſtowing on it a cloſe inſpection, we met with the ſtone on which, they told us, the angel was ſeated when Mary ſought the body of Jeſus: this ſtone had been removed from the entrance. The ſmall building, or chapel, in which the ſepulchre is encloſed was lighted by ſeveral large and handſome lamps, a certain number of which are always kept burning.

HISTORY *of* ASTRONOMY *for the* YEAR 1802.

Concluded from Page 349.

ON the 7th of June, I publiſhed the two laſt volumes of the large Hiſtory of the Mathematics by Montucla. The fourth is almoſt entirely devoted to the hiſtory of aſtronomy and navigation, which I communicated to the preſent period.

There has appeared alſo, in two volumes 4to, with twenty three plates, *Hiſtoire de la Meſure du Temps par les*

Horloges, by Ferdinand Berthoud, mechaniſt of the marine, member of the National Inſtitute, and of the Royal Society of London. It contains a deſcription of eſcapements, compenſation balances, moving ſpheres, and of the principal inventions of clock-work. The author ſpeaks of all the celebrated clock-makers, except Louis Berthoud, his nephew, to whom we are indebted for all the time-keepers made ſince 1784. I ſhall here take occaſion to obſerve, that Mr. Emery died at London, and that his widow has four time-keepers which ſhe wiſhes to diſpoſe of: they would be a valuable acquiſition.

We have received the 7th volume of the Tranſactions of the Royal Iriſh Academy, publiſhed in 1800, and in which Mr. Young examines the ſolution given by Newton of the problem reſpecting preceſſion of the equinoxes; alſo the 8th volume of the Iriſh Tranſactions, Dublin 1802.

On the 18th of July, my ſmall tables of logarithms appeared: they are the moſt convenient and the moſt correct yet given.

The third volume of the *Mécanique Céleſte* of C. Delaplace has been printed, and was publiſhed on the 29th of December. This work will form an epoch in phyſical aſtronomy. It exhibits a ſeries of important reſearches by that great geometrican, and the perturbations of each of the planets by the action of all the reſt; with a new theory of the moon, containing, beſide other things, the diſcovery of a new inequality, the period of which is 180 years, and of which I have already ſpoken.

M. Haſſenfratz has publiſhed his *Cours de Phyſique Celeſte*, or *Leçons ſur l' Expoſition du Syſtême du Monde*. He makes no mention in it of my aſtronomy, but he nevertheleſs has borrowed from it things which he could not find any where elſe. I have corrected ſome faults in it. (*Bibliotheque Françoiſe de Pougens.*)

The Board of Longitude has ſent to the printing-office obſervations made for two years with the new inſtruments of the obſervatory by Mechain and Bouvard, to be printed in folio like thoſe which Monnier publiſhed between 1751 and 1773, and thoſe of Greenwich in England, which were worthy of ſerving as a model.

On the 3d of July, M. de Roſel, a naval officer, arrived at Paris, with the journals of the voyage undertaken in ſearch of La Perouſe, under the command of captain d'Entrecaſteaux.

La Grandiere alſo has brought a journal of that voyage, which the Engliſh government had a year in their hands, but which they reſtored to him. At the depôt of the marine there are fifty-eight charts conſtructed during that voyage by Beautemps-Beaupré, hydrographer of the expedition.

In the month of June, I received intelligence from C. Bernier, who was at New Holland. Captain Baudin touched only in two places in an extent of 400 leagues which he traverſed on the weſtern coaſt. He was preparing to accompliſh the remaining part of the expedition to the north and ſouth: but it appears to me that the zeal of this aſtronomer has been thwarted by the indifference of the captain; and this voyage, on which we founded great hopes, will not be ſo productive as it ought to be.

The ſhip Lady Nelſon, ſent out with the Inveſtigator, captain Flinders, which arrived at New Holland about the middle of December 1801, fell in with the Geographe, commanded by Baudin. She then found at Port Jackſon, the Naturaliſte, commanded by Hamelin, and which ſailed about the middle of May, to go in ſearch of the Geographe, from which ſhe had been ſeparated by a gale of wind in the Straits of Baſſe. Captain Flinders has ſent home his obſervations, and a chart of thoſe parts of New Holland which he viſited.

Captain Flinders made a diſcovery between Van Dieman's Land and New South Wales, of which information was received in March 1802: Go-

vernor King's Iſland, Cape Alban Otway, Portland Bay, Cape Northumberland.

Joſeph Joachim de Ferrer has ſent me ſeveral poſitions obſerved on the Miſſiſſippi and on the Ohio, which will be of the more importance as the French government is employed with the means of deriving benefit from that new colony, which may be attended with immenſe advantages, as Raynal has ſhown in his *Hiſtoire Philoſophique*.

The Voyage to the Northern Part of Aſiatic Ruſſia, the Frozen Ocean, the Sea of Anadir, and the Coaſts of America, from 1785 to 1794, by commodore Billings, tranſlated by Caſtera, in two volumes quarto, has made us acquainted with countries before undeſcribed or defined. The ſhores of the Kouſina have been traverſed: a chart by M. Bauer, and Arrowſmith, the Engliſh geographer, is added. The officers complain of the commander, who would not allow them to penetrate further north, notwithſtanding the inſtructions he had received to ſearch for a paſſage through the Frozen Ocean.

Travels into the interior parts of Africa in 1797 and 1798, by Frederic Horneman, has been publiſhed. Horneman proceeded from Cairo to Mazoul. Another French edition, with additions by C. Langles, is in forwardneſs.

Geography has been enriched alſo by a Voyage to Senegal by C. Durand, one volume in quarto, with many plates. The author was a long time at Senegal; and I have mentioned his reſearches in a memoir on Africa.

M. Sutzen, a phyſician, accompanied by M. Jacobzen, a ſurgeon, is alſo preparing to penetrate into the interior parts of Africa. They have been furniſhed with obſervations by baron Von Zach, of Gotha. The duke of Gotha has given them a ſextant of ſeven inches radius, and a timekeeper by Emery; three artificial horizons, with their levels; an achromatic teleſcope of twenty inches, and two and a quarter inches aperture; a declination compaſs, a mariner's compaſs, and a camera obſcura.

M. Sutzen will proceed from Conſtantinople to the eaſtern coaſt of Africa, where he intends to join ſome of the caravans of Zinguebar or Monœmugi. He hopes to be four or five years abſent. (Von Zach's Journal for Auguſt 1802.)

On the 17th of July, we ſaw don Domingo Badia, commiſſary of war in Spain, who travels by authority of the prince of Peace, accompanied by Roixas, a naturaliſt. He will embark in England for Morocco, and will follow the route of the caravans of the interior.

Voyages à Madagaſcar, aux Indes Orientales, et à Maroc, by Alexis Rochon, a celebrated aſtronomer and geographer, have appeared in three volumes.

The general depôt of war at Paris continues its labours with ſurpriſing activity, as may be ſeen in the Moniteur of June 25 and October 16. Generals Calon, Clark, and Andreoſſy, who had the direction of it in ſucceſſion, have been ſucceeded by general Sampſon.

The map of the country between the Adige and the Adda will ſoon be followed by maps of all Piedmont, of the Italian republic, and of the iſland of Elba: thoſe of Bavaria, Helvetia, of the Valais, and of the four departments of the Rhine, are continued. More than a hundred geographical engineers are employed, among whom are the celebrated Nouet, Henry, and Tranchot.

On the 1ſt of July, M. Henry quitted Bavaria, diſguſted by the oppoſition of M. Bonne. The latter is ſtill occupied with the map of Bavaria; but we loſe the meaſurement of a degree, which M. Henry propoſed to make. However, we ſhall have from the Scheldt to the Adige, and from Breſt to Munich, an uninterrupted trigonometrical outline, which will ſoon be filled up with a complete to-

pography. A map of Egypt in fifty ſheets, and thoſe of the Morea and neighbouring iſles, are now engraving. Materials are collecting for maps of St. Domingo and of Louiſiana.

The beautiful map *des chaſſes*, a maſter piece of engraving, of which only five ſheets were terminated, will be carried to thirteen.

A plan is even in agitation for making a new and correct edition of the large map of France in 183 ſheets, which had been too much neglected. In the mean time, thirty are retouching.

The collection of manuſcript charts at the depôt, which already amounts to 7400, daily increaſes. C. Barbier-Dubocage, already known by his important labours, turns them to the beſt advantage poſſible; and the depôt of war, encouraged by the government, is about to produce to geography immenſe riches.

The firſt number of a topographical and military memorial, edited at the general depôt of war, has been publiſhed for November 1802. It contains a notice reſpecting the geographical charts; a treatiſe on geodeſic operations; tables for reducing the angles of one plane to another; the determination of heights by the barometer.

C. Nouet, who arrived from Egypt on the 5th of January, has already ſet out for Mount Blanc, where he will continue the laborious operations which he began in 1796.

The Ruſſians are going to conſtruct a map of Eſthonia and Volhynia.

M. Weiſs has terminated his map of Switzerland in ſixteen ſheets.

A beautiful chart of the ſouthern part of the geometrical ſurvey, by captain Mudge and Mr. Dalby, has been engraved in England in four ſheets.

M. Ciccolini has made a tour to the coaſts of the Adriatic, where he has verified the poſitions of a great number of points. In regard to Pezaro there was an error of 30″ in time.

The travels of baron Von Zach, ſo uſeful to the geography of Germany, are detailed in the excellent journal which he publiſhes every month.

M. Mentelle has undertaken for the firſt Conſul a terreſtrial globe a metre in diameter, which will contain all the new diſcoveries collected with great care and erudition.

On the 26th of March, I obtained permiſſion to found at the Inſtitute a prize, to be aſſigned to the perſon who, in the courſe of the year, ſhall make the moſt curious obſervation, or publiſh the moſt uſeful memoir, in regard to aſtronomy.

C. Chaptal, whom we have the good fortune to have for miniſter of the Interior, and whoſe labours as a philoſopher announce his zeal as a miniſter, has attached calculators to the Board of Longitude; he has granted gratifications to C. Flaguergues, an aſſiduous obſerver, and to C. Pons, keeper of the obſervatory of Marſeilles, who diſcovered a ſecond comet.

When the conſultation eſtabliſhed for diſtributing rewards, and which was very uſeful in 1793 and 1794, was ſuppreſſed, the Inſtitute was charged to take up the ſame buſineſs, and to propoſe to government the gratifications it would be neceſſary to give. The Inſtitution has not yet exerciſed this right, but I have propoſed it to fulfil its obligation.

M. Jacotot, profeſſor of aſtronomy at Dijon, has obtained from C. Giraudet, prefect of La Côte-d'or, the repairs neceſſary for the obſervatory damaged by a fire. I hoped I ſhould have been able to obſerve there the eclipſe of the ſun on the 28th of Auguſt: but the ſky was abſolutely cloudy, as it was at Paris. We have received obſervations of that eclipſe from C. Thulis at Marſeilles, and from C. Flaguergues at Viviers.

Prince Henry of Wirtemberg, brother of the empreſs dowager of Ruſſia, who reſides at Hamburgh, has purchaſed the beautiful inſtruments made by Megnié, of Paris.

The ſpeculum for a teleſcope, which

Dr. Herſchel ſent to Peterſburgh, has been ſent back to him for the purpoſe of being mounted. Kramp ſolicits for the eſtabliſhment of an obſervatory at Cologne.

The academy of Turin, requeſts the re-eſtabliſhment of its obſervatory; and M. Henry has offered to take the direction of it.

Fathers Canovai and Delricco, who have at Florence the obſervatory of father Ximenes, have ſent us a liſt of their inſtruments, to prove that they cannot exert themſelves with any advantage for aſtronomy; but they have publiſhed tables of logarithms.

The king of Etruria has announced that he ſtill entertains a deſign of placing an aſtronomer in his *Cabinet de Phyſique*, where he has already ſome excellent inſtruments.

General Chabert, who has returned from England after an abſence of ten years, has been aſſociated with the Board of Longitude, to which office he was juſtly entitled by his geographical labours; and his age of ſixty-eight years does not prevent him from being preſent at the ſittings, and from being uſeful by his advice and experience.

The youngeſt ſon of our celebrated aſtronomer C. Mechain has been appointed by the Board of Longitude ſecretary of the obſervatory, which affords him an opportunity of devoting himſelf to aſtronomy. Auguſtine Francis Mechain was born at Paris, March 5, 1786.

He has ſucceeded his brother Iſaac, who having returned from Egypt has been appointed commiſſioner of foreign relations at Galaſia, in Moldavia.

C. Lechevalier has conſtructed in the Hotel of Foreign Relations a ſmall obſervatory, where he can gratify the taſte and curioſity of which he gave proofs during his ſtay at Conſtantinople.

C. Louis Berthoud has conſtructed for the obſervatory a clock worth a thouſand crowns. The pivots turn in rubies, and we hope it will equal that given by the firſt Conſul to the obſervatory of Milan.

C. Poſs, a watchmaker of great ſkill and ingenuity, made an experiment at my obſervatory of a clock which beats half ſeconds with a free eſcapement, and which goes with wonderful regularity.

C. Levêque has publiſhed in the fourth volume of the Memoirs of the Inſtitute, a lerned paper on the longitude, and particularly on Maignon's charts for reducing the moon's diſtances obſerved at ſea.

C. Richer has made a new trigonometric compaſs, or compaſs for reducing the moon's diſtances from the ſtars. It has ingenious inventions for dividing into unequal parts the rules containing the diſtance, the ſum, and the difference of the heights. In my ſhort Treatiſe of Navigation I have given a deſcription of the inſtrument which gained the prize in 1791; and in the *Connoiſſance des Temps* for the year 4, the demonſtration of the formula of M. de la Grange, which ſerves as a foundation for this inſtrument; which, however, has been much improved: the only inconvenience is, that it will coſt 600 francs.

Mr. Troughton has finiſhed the model of Mendoza's circle, which gives the double of the multiple of Borda's circle, even retaining the ſmalleſt fixed mirror.

A curious detail reſpecting the calendar of the Indians has been publiſhed in the letters of the abbé Sevin.

C. Girard read in the Inſtitute a long memoir on the Egyptian milometer, the value of which he determined in the iſland Elephantine, on the very ſpot, nineteen feet 5·6 lines; which ſhows that the ancient meaſurement of the earth by Eratoſthones was very correct.

The abbé Teſta has publiſhed at Rome a diſſertation on the zodiac found at Dendara (in Greek, Tenthyris) in Egypt. He undertakes to prove that it is not older than 100 years before the vulgar era. The Hiſtory of Herodotus, tranſlated by

Larcher, edition of 1802, contains a ſally againſt the unbelievers, who carry back the period of one of the zodiacs of Tentyra, at preſent Dendara, and of Eſné, or Henne, to 6000 years; and the author's only reaſon is, that it would be 217 years before the creation.

He adds a notice by Viſcondi, who ſays that the firſt ſign of the great zodiac is Leo; that Libra, the ſymbol of the equinox, is in its place; and that the reſemblance of the greater parts of the ſigns to the Grecian proves that this zodiac was conſtructed at a time not ſo remote as the earlieſt periods of the Greek aſtronomy: he is almoſt convinced that this work belongs to the firſt century of the vulgar era.

The exterior cornice exhibits a large Greek inſcription, which may decide the queſtion; but another Greek inſcription contains Roman names, and announces a Cæſar, who could be only Auguſtus or Tiberius. In a word, M. Viſconti ſays that the architecture of the temple of Tentyra, though in the Egyptian taſte, and though ſome hieroglyphics are carved out on the walls, has an evident relation to the arts of Greece. For my part, I have remarked by the engraving of M. Denon, that Cancer is inſcribed in two lines, at the beginning of the deſcending ſigns and at the end of the aſcending; which proves that the ſolſtice was toward the middle of Cancer; and this carries it back 3000 years. But I have ſhown in my Aſtronomy that Eudoxus, who wrote 370 years before our era; and Aratus, who followed Eudoxus, deſcribed the ſphere according to an older tradition, which goes back twelve or thirteen hundred years before the vulgar era, and which came from Egypt or India. Petau, Whiſton, Freret, and Legentil, found nearly the ſame date: it is therefore natural to believe that it ſhould be found in the zodiac of Tenthyris, which conſequently, in this reſpect, may be conſidered as a work of the Greeks.

C. Villoiſon, well known by his Greek erudition, has celebrated aſtronomy in Latin verſes, which announce both his talent for Latin poetry and his taſte for aſtronomy. He addreſſed them to me on my birth day, and publiſhed them in the *Magazin Encyclopedique*. In the notes he ſpeaks of the labours of the uncle, the nephew, and niece; and of citizen Burckhardt, their moſt learned co-operator and their moſt intimate friend.

C. Boulage, of Troye, has written a beautiful epiſtle to Piazzi on the diſcovery of his planet: it has been inſerted in the fourth number of the Memoirs of the Academical Society of the department of Aube.

Aſtronomy this year has loſt the reſpectable Auguſtin Darquier, member of the National Inſtitute. He was born at Toulouſe, November 23, 1718, and died on the 10th of January 1802. He devoted himſelf early to aſtronomy through natural inclination. Though in a town diſtant from the capital, he applied to it with a zeal and activity which were not leſſened by age. He purchaſed inſtruments, eſtabliſhed an obſervatory in his own houſe, and cauſed two volumes of obſervations to be printed at his own expence. His tranſlation of Lambert's Coſmologic Letters has been printed at Amſterdam. He inſtructed pupils, paid calculators, and being in no need of the aſſiſtance of government he was indebted for every thing to himſelf. I have printed his laſt obſervations in my *Hiſtoire Celeſte*; they go as far as the 19th of March 1798; and he had ſome more to ſend me, though eighty years of age. The Lyceum of Toulouſe will give us ſome further particulars reſpecting his long and intereſting career.

Aſtronomy loſt alſo in France, on the 1ſt of March, M. Lemery, whoſe ſingular turn for calculation I diſcovered thirty years ago. Being then attached to the marquis De Puſieux, he employed all his leiſure time in calculation. I made him calculate a great many places of the moon, which were

publiſhed in 1777, in the *Connoiſſance des Temps* for 1779: and for fifteen years he made all the calculations of that work with equal care and aſſiduity.

Daniel Bogdanich died at Peſt, in Hungary, on the 31ſt of January, at the age of thirty-ſeven. He was occupied with the geography of Hungary. (See Von Zach's Journal for April 1802.)

M. George Frederic Kordenbuſch, aſtronomer of Nuremberg, died on the 3d of April, at the age of ſeventy-one.

In the month of September baron De Vega was drowned in the Danube, and it is ſuppoſed threw himſelf into that river. We are indebted to him for the large edition of Vlacq's tables of logarithms in folio, containing the numbers to 100,000; and the fines from ten to ten ſeconds, which had become very rare, and in which he corrected many faults.

Meteorology has this year exhibited very extraordinary phenomena. In the month of January, an extraordinary inundation: the Seine roſe 22 feet and a half above the height of 1719.

On the 25th of May, a froſt, which did immenſe hurt to the productions of the earth.

On the 14th of May, ſnow fell at Munich, and continued for forty-five hours: the trees were ſtripped of their leaves, and overturned.

In the month of July and Auguſt, an exceſſive heat took place, and continued forty days. The thermometer at the obſervatory ſtood at 97° F. which is very uncommon at Paris.

The need of having meteorological rules founded on obſervation, induced our learned miniſter to eſtabliſh a correſpondence on that ſubject, and an office to conduct it.

Meteorological obſervations have been made in thirty places, from the convent of Mount Cenis as far as the borders of the ſea.

John Dominic Beraud, born in 1741, formerly a draftſman at Coni, and who for twenty years has reſided at Turin, continues to employ himſelf in making meteorological obſervations, and ſends us regularly his reſults.

Laſon, geographical engineer in Louſiana, has ſent us meteorological obſervations made at New Orleans; and we have received ſome made at Guadaloupe by C. Hapel Lachenaye between the years 5 and 9. The fourth volume of the Memoirs of the Inſtitute contains ſome alſo.

C. Coulomb read in the Inſtitute experiments on the method of magnetizing needles to ſaturation; with a comparative view of the methods of Knight, Duhamel, and Æpinus. He has pointed out to navigators the ſureſt means of obtaining the beſt needles. The broadeſt and largeſt are preferable, but they muſt not be thick. This philoſopher has publiſhed in the fourth volume of the Inſtitute a curious memoir on the dipping needle.

The declination of the magnetic needle at Paris was obſerved by C. Bouvard at the obſervatory, on the 2d of May, to be 22° 3′, and on the 22d of July 21° 45′.

C. Lenoir, at the Garden of the *Depôt de la Marine*, found it on the 20th of June to be 22° 6′ with a compaſs, on which he employed every care poſſible. But the changes which take place at the different hours of the day, and in different months of the year, amount to more than 10′. We can therefore only ſay that the declination is 22°, and it was found to be the ſame in 1792 and 1800; ſo that at preſent it appears to be ſtationary, whereas ten years ago it increaſed from 6′ to 8′ annually.

Forty years ago I obſerved it to be 18½°. (See *Connoiſſance des Temps* for 1762.)

M. Simonin, profeſſor of Croiſic, has ſent us the reſult of a thouſand obſervations on the tides, with the tables neceſſary for keeping an account of the variations produced by the ſun and moon according to their altitude and diſtance.

M. Romme, profeſſor of Rochfort, has ſent to the Inſtitute obſervations made every three minutes from low water to full moon to make known the irregularities, which are very ſingular; and a new table of the retardation of the tides, deduced from an immenſe number of obſervations.

He has preſented alſo a general table of the tides, the currents, and winds, obſerved in all the ſeas of the earth; the publication of which will form an important ſupplement to the large Treatiſe on the Flux and Reflux of the Sea, which I publiſhed in 1781.

Mr. Grenier, an officer known by his diſcoveries in the Indian ſeas, has written a conſiderable work on the winds and currents in all the ſeas; with a theory which renders the explanation of them eaſier. He propoſes to lay it ſoon before the public.

THE PICTURE: A TALE.

NOT many years ago, while Eneas Sylvius Piccolomini was governor of Rome, an honeſt man, worn down by age and infirmities, and become incapable of following the occupation by which he had gained a ſupport for himſelf and his aged wife, found it neceſſary to ſell ſome of the few goods he was poſſeſſed of, in order to prolong exiſtence. Among other articles, there was a ſmall picture by Raphael, left him by his foreſathers; but he was not capable of judging of it value, and the ſmoke and duſt which covered it, contributed to depreciate it in his eyes. In order to make ſome money by it, he applied to a painter, who (like many others) was more ſkilful in dealing in pictures than in producing any from his own pencil. Soon as he had ſeen the piece, he diſcovered the capital maſter it was by, and conſequently its great value; but avariciouſly inclined to take advantage of the old man's ignorance in painting, and likewiſe of his poverty, he began to laugh at it, as being a paltry dawb of no value; and offered him a few paolis, which he even pretended to give him more out of charity, than as a due compenſation for the picture. His offer was accepted, and he exulting in his heart at his rich prize, and laughing at the poor man's ſimplicity, carried the picture away.

A few days after, it happened that an old friend called on the poor man, and not perceiving the picture which he had been uſed to ſee, aſked him what had become of it: he was anſwered, that it had been ſold; alſo informed who had been the purchaſer, and what had been the price. The honeſt friend exclaimed with indignation, on finding in what manner the good old man's ſimplicity had been betrayed; he aſſured him it was by the hand of a great maſter, and of much value; he adviſed him to preſent himſelf before the governor, and, in order to encourage him, offered to accompany him there himſelf.

The learned prelate, having heard attentively the caſe, ordered them to leave him the dimenſions of the picture; and having learnt alſo the ſubject it repreſented, diſmiſſed them.

This worthy divine fortunately had in his gallery two pictures nearly of the ſame ſize as that which had been deſcribed to him; he ordered one to be taken out of its frame, and then ſent for the painter and dealer in pictures. On his arrival, the governor aſked him, whether he could procure him a picture to fit the frame he ſhowed him, and match the other picture. I have got one that will juſt ſuit your excellency, anſwered he; and it is a capital picture by Raphael: it ſeems made on purpoſe for that frame. Let me ſee it then, replied the governor; the painter went home, and ſoon returned with the picture.

It repreſented a Holy Family, done in the moſt maſterly ſtyle. When the ſmoke and duſt were removed, the

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colours appeared to perfection; the exactneſs of the contours, the ſoft complexions of the fleſh, the gracefulneſs of the drapery, the elegance of the figures, the truth of expreſſion, which characterize Raphael, all were diſcoverable to the eye of a connoiſſeur. The picture being placed in a good light, where it appeared to the beſt advantage, the prelate examined it for ſome time, and aſked its price. I have, ſays the painter, been offered two hundred ſequins by a friend yeſterday, for an Engliſh gentleman, who is eager to have it. I have refuſed the offer, as I expect two hundred and fifty; ſuch a capital performance deſerves ſuch a price. However, if the picture pleaſes your excellency, I will be contented with any thing above what has been offered me. The prelate was ſtruck with horror at the wickedneſs of the wretch; but ſtill diſſembling, he told him with an eaſy air, that he would not diſpute about the value of the picture, nor that it merited a high price; but he found it difficult to be perſuaded that he had rejected ſo great an offer. The painter proteſted in the moſt ſerious and ſolemn manner, that he had told the real truth, and that if his excellency pleaſed, he would bring his friend to confirm the fact.

You have then been offered, replied the governor, two hundred ſequins?—I have, pleaſe your excellency, and may expect more for it.—Well then, that is enough. Draw that curtain, ſaid he, to one of the attendants: the order was obeyed, and the good old man appeared, who had been ſent for, and there concealed. It may eaſily be imagined what a ſhock this was to the painter. He turned pale, was covered with confuſion, and began to tremble from head to foot. The prelate for ſome moments left him in his confuſion; then aſſuming an air of ſeverity, ſaid, thus, villain, thou takeſt a baſe advantage of the ignorance and poverty of an unfortunate old man? While thou wert betraying him in ſuch a vile manner, didſt thou not feel nature ſhudder within thee? Did not the bread which thou waſt robbing from the mouth of a decayed infirm old man, excite any remorſe in thy heart? Execrable wretch! Thou well knoweſt the puniſhment due to thy wickedneſs. It is too much clemency to condemn thee only by the ſentence thou haſt pronounced: however, let that be thy doom; but heaven preſerve thee from another crime; for thou ſhalt pay dearly for both at once. Now the two hundred ſequins which that picture deſerves by thy own confeſſion, and which thou ſayeſt are ready, thou ſhalt give without delay to this man: and the firſt fraud I hear of thee ſhall prove thy ruin.

The convicted painter went away, terrified, confuſed, and diſmayed. The good old man, ſhedding tears of gratitude and admiration, bleſſed a thouſand times his wiſe protector and benefactor; who felt ſenſibly the double pleaſure of having ſaved an innocent man from being duped, and caught a wicked deceiver in his own ſnares.

AN ACCOUNT OF WOOLWICH:

With a VIEW *of the* TOWN.

THE town of Woolwich, called in the time of the Saxons, *Hulviz*, or the town on the creek of the river, is ſituate on the ſouthern bank of the River Thames; it is very populous, and has been much improved of late years, owing to the number of yards and works erected here, for the naval ſervice and the ordnance. The Thames is about a mile over at high water, and as the channel lies direct eaſt and weſt for about three miles, the tide runs very ſtrong, and the river is totally free from ſhoals and ſands. It has ſeven or eight fathoms water, ſo that the largeſt ſhips may ride with ſafety, even at low water.

The dock at Woolwich claims pre-

ference before the others, in importance to government, and in its antiquity, the largeſt ſhips having been built here for ſeveral reigns paſt. When the buſineſs of the royal navy increaſed, in the time of queen Eliſabeth, new docks and launches were erected here, and places prepared for building and repairing the largeſt veſſels, becauſe there was a freer channel, and a greater depth of water than at Deptford. On July 3, 1559, queen Eliſabeth honoured this place with her preſence at the launching of a fine ſhip, which was called after her own name, The Eliſabeth. In the year 1637, the Royal Sovereign was built in this dock, of 1637 tons burthen, beſide tonnage: it was 128 feet long, 48 broad; from the fore-end of the beak-head to the after-end of the ſtern, 152 feet; from the bottom of the keel to the top of the lanthern, 76 feet. She had five lanthems, the largeſt of which would hold ten perſons upright; three ſluſh-decks, a fore-caſtle, half-deck, quarter-deck, and round-houſe. The lower tier had 60 ports, the middle one 30, the third 26, the fore-caſtle 12, half-deck 14, and as many more within; beſide ten pieces of ordnance chace forward, and ten right off, and many loop-holes in the cabin for muſkets; eleven anchors, one of which weighed four thouſand four hundred pounds. This ſhip was curiouſly carved and gilt, and the Dutch, from the ſlaughter and havoc her cannon made among them, gave her the name of the *Golden Devil*. The dock-yard, and the buildings belonging to it, are ſurrounded by a high wall, are ſpacious and convenient, and abundantly filled with all ſorts of ſtores and naval proviſions. The whole is under the immediate inſpection of the navy-board, which appoints officers for the management of this yard, who have handſome houſes to reſide in, and a number of inferior clerks and ſervants under them, who are much the ſame as thoſe at Deptford, excepting that their ſalaries are not ſo large.

There is likewiſe a large rope-walk, where cables are made for men of war, and in the lower part of the town is the gun-yard, commonly called the Park, or the *Gun-park*, where are cannon of all ſorts for ſhips of war; every ſhip's guns lying in tiers, or rows apart; heavy cannon for batteries, and mortars of all ſizes, ſo that there have been laid up here at once, between ſeven and eight thouſand pieces of ordnance, beſide mortars and ſhells without number.

There is both a civil and a military branch of the office of ordnance eſtabliſhed at Woolwich. The civil branch is under the management of a ſtore-keeper, clerk of the ſurvey, clerk of the cheque, clerk of the foundery, and other officers, who have many inferior ſervants and workmen under them. The military branch of the office of ordnance is under the direction of a chief engineer, who ranks as colonel; two directors, who rank as lieutenant-colonels; four ſub-directors as majors. The engineers in ordinary rank as captains, the engineers extraordinary as captain-lieutenants, and the ſub-engineers as lieutenants; beſide which, there are ſeveral practitioner engineers. Under this office, in a place called the Warren, artillery of all kinds and dimenſions are caſt, which, before the building of the powder magazine at Purfleet, were uſually proved here, in the preſence of the principal engineers and officers of the board of ordnance, to which many of the nobility and gentry are invited, and ſumptuouſly entertained by them. The gunpowder, which is contracted for by the office of ordnance, is proved here, with regard to its ſtrength and goodneſs, and its fitneſs for the public ſervice. There is, beſides, a laboratory belonging to this office, under the direction of a comptroller, a chief fire-maſter, a fire-maſter's mate, a clerk, and other workmen and labourers. The companies of matroſſes are employed in making fireworks and cartridges, and in charging bombs,

carcaſes, and grenadoes, for the purpoſes of ſupplying the naval and military ſervice.

The juſtly celebrated Royal Academy is eſtabliſhed in this town, for the inſtruction of young gentlemen intended for engineers; they are called cadets, and are appointed by the board of ordnance. They are taught the principles of fortification, and every branch of military ſcience, beſide French and Latin, writing, fencing, and drawing. To this academy belong, a governor, lieutenant-governor, and maſters for the different branches of ſcience and literature. The officers under both branches of the ordnance have handſome houſes and apartments allotted to them according to their ranks and ſtations.

Woolwich has a market weekly on Friday, but no annual fair. The pariſh extends ſouthward as far as the London road, near Shooter's-hill, adjoining to which is Woolwich common. The church ſtands on an eminence above the town; it is a handſome brick building, ornamented with ſtone, and has a ſquare tower or ſteeple, in which is a good ring of bells.

BIOGRAPHICAL REGISTER *of eminent* PERSONS *deceaſed in* 1802.

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JAMES JOHNSTONE, M. D.

DR. Johnſtone, was the fourth ſon of John Johnſtone, eſq. of Galabank, one of the moſt ancient branches of the family of Johnſtone of Johnſtone. He was born at Annan in the year 1730, and was initiated into the rudiments of claſſical knowledge under the rev. Dr. Henry, the celebrated hiſtorian of Great Britain. Being deſtined for the profeſſion of medicine, he was removed to Edinburgh, where his ſtudies were aſſiſted by the inſtructions of Whytt, Plummer, Monro, and Rutherford, who were juſtly ranked among the moſt eminent profeſſors of the ſcience; and ſhortly after, he applied himſelf to anatomy and chymiſtry at Paris, under the directions of Ferrein and Rouelle, who were at that time eſteemed the ableſt profeſſors in the ſchools of France. Before he had reached his twenty-firſt year, he took the degree of Doctor of Medicine, and publiſhed a Theſis, 'De aeris factitii imperio in corpore humano,' which gained him conſiderable applauſe, and ſome valuable friends. In 1750, he ſettled at Kidderminſter, a thriving town in Worceſterſhire, which at that time, and ſome years afterward, was ſubject to a putrid fever of alarming malignancy, and called the Kidderminſter fever, from its peculiar ſymptoms and locality. His ſkilful method of curing this dreadful diſorder did not fail to raiſe his reputation in that part of the country. He rejected the uſual means of bleeding and purging, which were then adopted in theſe caſes, and recommended bark, wine, mineral acids, free ventilation of air, and the affuſion of water and vinegar. This treatment of the diſorder was ſucceſsful, and proved the means of introducing him into conſiderable practice. During his inveſtigations of this complaint, he made the important diſcovery, that mineral acid vapours correct or deſtroy putrid febrile contagion; and for this purpoſe, he ordered vitriolic acid to be poured upon common ſalt, in a convenient veſſel, and over a proper heat. It is rather ſingular, that more than twenty years afterward the ſame method ſhould be recommended by the celebrated Guyton de Morveau, in France, and magnified into a great diſcovery! The ſame principle has been applied within a later period, and a claim for remuneration from parliament founded upon it.

Dr. Johnſtone was well known in the learned world, by many intereſt-

ing publications, particularly by his phyſiological inquiry into the uſes of the ganglions of the nerves, which were inſerted in the 54th, 57th, and 60th volumes of the Philoſophical Tranſactions, and afterward enlarged and printed ſeparately. He is alſo well known as the friend and phyſician of the celebrated George lord Lyttleton, of whoſe death-bed he has given us that affecting and inſtructive account, which Dr. Johnſon has inſerted in his Lives of the Poets.

In a treatiſe on the Walton Water, which in quality ſtrongly reſembles the Cheltenham, he has pointed out the probable function of the lymphatic glands, which he ſuppoſes to be organs deſtined to purify, digeſt and animalize the matters ſelected and abſorbed by the lacteal, and other lymphatics, thus fitting them for their union with the blood, and the nutrition of the body. At Kidderminſter, Dr. Johnſtone continued to poſſeſs an extenſive practice, til the death of his eldeſt ſon, a phyſician riſing into eminence, who fell a martyr to humanity in attending the priſoners at Worceſter, infected with the jail-fever; at the ſame time, the circumſtance of the death of his friend the Rev. Job Orton, induced him to remove to Worceſter. In this city, which has been celebrated for its phyſicians, ſince the days of Dr. Cole, the friend of Sydenham, he continued to practiſe to the great benefit of the community, and to the general ſatisfaction of an extenſive circle of friends. In his youth he had been ſubject to pulmonary complaints, which his temperance and caution had averted. They recurred in his declining years; and during the laſt ſpring he had bled himſelf rather too profuſely. In the laſt attack, which was aggravated by exceſſive exertion and fatigue, his weakneſs was ſuch as to forbid the repetition of bleeding, and his ſtrength gradually decayed, without any diminution of his intellectual powers. His death was attended with the moſt perfect compoſure and reſignation. He expired on the 28th of April, in his ſeventy-third year, after a ſhort, and no wiſe painful ſtruggle, having ſat up and converſed with his family, till within a few hours of the awful change, cheerful, patient, and reſigned. The public has ſuſtained a heavy loſs in this eminent phyſician; for what can ſupply the experience of more than half a century, employed not in decorating fanciful theories, but purſuing uſeful inductions! The correſpondent and friend of Haller, Whytt, Cullen, and Fothergill; the boſom friend of the virtuous Lyttleton, and the pious Orton;—the active and humane phyſician, the ſagacious phyſiologiſt, the profound antiquarian;—few men have obtained a larger portion of profeſſional utility or private regard, than Dr. Johnſtone. In his temper he was cheerful, though ſometimes haſty—in his converſation lively and inſtructive, and in his domeſtic relations, he was the beſt of fathers: his whole life was a ſacrifice to the advantage of his children. Few men have ſurpaſſed him either in his profeſſional or private character; and though the memory of his perſonal ſervices may not be tranſitory, yet he has erected a ſtill more durable monument to his fame, in the various practical improvements of the medical art, which juſtly rank him among the benefactors of mankind.

GEORGE FORDYCE, M. D.

Dr. Fordyce was born in Aberdeen, November 18, 1736, and was the only and poſthumous child of Mr. George Fordyce, the proprietor of a ſmall eſtate in the neighbourhood of that city. His mother having married, not long after his father's death, he was taken from her when only two years old, and ſent to Fouran, where he received his ſchool education. After the uſual preparation, he was removed to the univerſity of Aberdeen, where he was appointed Maſter of Arts, at the early age of fourteen. From the trivial circumſtance of his taking delight in viewing phials of co-

loured liquors in the windows of apothecaries' ſhops, it is ſaid that he received his early bias toward the profeſſion of medicine. He was moreover acquainted with the late learned Alexander Garden, M. D. who was afterward a phyſician of eminence in South Carolina, but then an apothecary in Aberdeen, who encouraged and excited him to purſue his medical ſtudies. He was accordingly, at the age of fifteen, ſent to his uncle, Dr. John Fordyce, who at that time practiſed medicine at Uppingham, in Northamptonſhire. He remained with him a few years, and then removed to Edinburgh, where he received his diploma of M. D. after a courſe of ſtudy of about three years. This degree was conferred in October 1758; and his Inaugural Diſſertation was upon Catarrh. From the celebrated Dr. Cullen, who was then in Edinburgh, he received many teſtimonials of regard, and alſo conſiderable private aſſiſtance to enable him to proceed in his ſtudies. The pupil retained a grateful ſenſe of theſe favours, and always ſpoke of his inſtructor in terms of the higheſt reſpect, ſtyling him often, 'his learned and revered maſter.' He repaired to London, about the end of 1758, and ſhortly after went to Leyden, chiefly with the deſign of ſtudying anatomy under the celebrated Albinus. In 1759, he returned to London, where he took the reſolution of fixing himſelf as a lecturer and practitioner of medicine. His friends expreſſed their doubts to him of the probability of his ſucceſs as a lecturer in London; but inſpired as he was with that confidence which attends the poſſeſſion of great talents, he determined to perſevere in his reſolution, and before the end of 1759, he commenced a courſe of lectures upon Chymiſtry, to an audience conſiſting of only nine pupils. The plan of public lectures was a novel circumſtance in London, but it had been the approved method purſued at Leyden and Edinburgh, the moſt renowned ſchools of medicine. In 1764, he began to lecture upon Materia Medica, and the practice of phyſic. On theſe ſubjects he continued to communicate inſtruction nearly thirty years, giving three courſes of lectures during the year. A courſe laſted nearly four months; and during it, a lecture of an hour was delivered ſix times in the week. His inſtructions commenced at ſeven in the morning, and ended at ten, his lectures being given one immediately after the other. In 1765, he was admitted a Licentiate of the College of Phyſicians: and in 1770, he was choſen phyſician to St. Thomas' Hoſpital, after a warm conteſt with the preſent ſir William (then Dr.) Watſon. The number of votes for Dr. Fordyce was 109, for Dr. Watſon 106. In 1774, he became a member of the Literary Club; and in 1776, was elected a fellow of the Royal Society. In 1787, he was admitted a fellow of the College of Phyſicians, notwithſtanding the zeal he had diſplayed againſt that body, in the diſpute between the fellows and the licenciates, which had exiſted twenty years before. But as the college was preparing a new edition of their Pharmacopœia, and as none of their body was acquainted with chymiſtry, they wiſely ſuppreſſed their reſentment, and by admitting him, ſecured the aſſiſtance of a perſon fully competent to the taſk. In 1793, he aſſiſted in forming a ſmall ſociety of phyſicians and ſurgeons, which has ſince publiſhed two volumes, under the title of 'Medical and Chirurgical Tranſactions,' and continued to attend its meetings punctually till within a month or two before his death. He communicated various papers on important ſubjects to the Royal Society, which have been printed in the Tranſactions of that learned body. In a work, entitled, 'Elements of the Practice of Phyſic,' he publiſhed an abſtract of his lectures on that claſs of ſubjects. His other principal works are, 'Elements of Agriculture and Vegetation,' corrected by the doctor from notes taken by one of

his ſcholars. 'A Treatiſe on the Digeſtion of Food,' which was originally read before the College of Phyſicians, as the Gueſtonian Lecture. 'Four Diſſertations on Fever.' A fifth, on the ſame ſubject, has been left by him in manuſcript, and will ſhortly be published. His other works appeared in the Philoſophical Tranſactions, and in the Medical and Chirurgical Tranſactions. In conſequence of his great reputation, both as a phyſician and a chemiſt, he obtained a contract from government for the ſupply of the acid preparation of cabbage, known by the name of ſour crout, for the uſe of the royal navy. The great utility of this preparation in preſerving ſeamen from the ſcurvy in long voyages, has been ſufficiently aſcertained; and we may be convinced that Dr. Fordyce fulfilled his contract in a manner beneficial to the navy, and advantageous to his own private fortune. His practice was very extenſive, as ſoon as his ſuperior merit became known, and continued to be ſo till the decline of his health. He was remarkable for punctuality to his appointments for conſultation, and modeſty in delivering his opinions, being aware of the uncertainty of ſcience, and little diſpoſed to yield to the raſhneſs of ill-founded conjectures. His diſſolution was occaſioned by a dropſy in the breaſt, which deprived the world of his talents, on the 25th of May, in the 65th year of his age. The whole medical faculty confeſs that they have loſt by his death one of their brighteſt ornaments.

THOMAS GARNETT, M. D.

Dr. Garnett, who acquired ſo much celebrity as a lecturer in the royal inſtitution, was born near Kirkby-Lonſdale, in Weſtmoreland, where his father was the proprietor and cultivator of a ſmall eſtate. Having diſcovered uncommon capacity at a very early age, his father determined to ſpare no expence in his education, and, when he had paſſed the uſual time at a grammar ſchool, placed him under the care of Mr. Dawſon, of Sedberg in Yorkſhire, a gentleman diſtinguiſhed for his ſkill in the mathematics. He dedicated a period of four years to the cloſeſt ſtudy of the ſciences, and having fixed on the profeſſion of medicine, he removed to Edinburgh, and became a pupil of Dr. Browne, whoſe ſyſtem he invariably practiced and defended by his arguments. After a reſidence of ſome years, he was favoured with a degree, upon which he repaired to London, in order to apply himſelf to the ſtudy of ſurgery. A vacancy for a phyſician at Harrowgate happening at this time, by the death of Dr. Wilſon, Dr. Garnett began his profeſſional career at that place. But though this ſituation proved lucrative, yet ſeveral circumſtances contributed to diſturb his tranquillity, and he determined to abandon it. He then formed a deſign of removing to America, which by the importunity of his friends he afterward relinquiſhed. It having been ſuggeſted to him that a courſe of lectures on chemiſtry and natural philoſophy might be well received at Liverpool, he accordingly embraced the idea, and was gratified by a ſucceſs that exceeded his warmeſt expectations. The ſame courſe of lectures he ſoon after delivered at Mancheſter, which was attended with an equal portion of ſucceſs. His reputation was now firmly eſtabliſhed, and he became a candidate, and a ſucceſsful one, for the lectureſhip of Anderſon's inſtitution in Glaſgow. The managers of the royal inſtitution, induced by his well earned celebrity, offered him the place of lecturer in phyſics and philoſophy, a circumſtance very honourable to Dr. Garnett, as it was totally unattended by ſolicitation on his part. An offer of this nature could not well be refuſed; he therefore removed to London, and delivered lectures at the royal inſtitution, during two ſeaſons, to a crowded and brilliant audience. In this ſituation he gave general ſatisfaction,

and was diſtinguiſhed for the eaſy and obvious method of explanation with which he familiarized the principles of experimental philoſophy, without the aid of rhetorical action and declamation. His ſucceſs now emboldened him to enlarge his views of rational ambition, and he determined to relinquiſh his place in the royal inſtitution, and to commence as philoſophical and medical lecturer on his own account. He accordingly took a houſe in Great Marlborough-ſtreet, where he built a commodious lecture-room, and provided an extenſive philoſophical apparatus: he had the pleaſure, laſt winter, to ſee his forms filled with reſpectable pupils. He continued to proceed in his career with every proſpect of ſucceſs; but, during his attendance as phyſician to the Mary-le-bone diſpenſary, he was ſeized with a typhus fever, which put an end to his exiſtence on the 28th of June, in the 37th year of his age.

As an author Dr. Garnett is known to the world by his Tour through Scotland; by his Analyſis of the Mineral Waters at Harrowgate, Moffet, Horley-Green, &c. by his Lecture on Health, and by ſeveral papers in the Memoirs of the Medical Society of London, the Royal Iriſh Academy, and the Literary and Philoſophical Society of Manchester, of which bodies he was a member. Before he quitted Harrowgate, he married a miſs Cleveland, an amiable woman, who was wonderfully attached to him, and participated in his favourite ſtudies. He returned her affection with equal ardour, and they ſeemed deſtined to complete their mutual happineſs, when, in giving a ſecond daughter to the world, ſhe expired in his arms. It is eaſy to conceive the poignant ſorrow of the huſband on this occaſion. The wiſh of providing for his children rouſed him to uncommon exertions, and he has fallen a victim to his laborious efforts. He left his Lectures on Zoonomia in manuſcript, which are to be publiſhed by ſubſcription for the relief of his helpleſs orphans, who, unleſs befriended by the patronage of the public, muſt languiſh in indigence and obſcurity. Though the number of ſubſcribers is large and reſpectable, yet the expence of publication, it is feared, will leave only a moderate ſum for the protection of the unfortunate little orphans. The generoſity of our nation provides for the family of the warrior who defends it, and it ought to contribute to the comfort and happineſs of that of the philoſopher, who has inſtructed and enlightened it.

The Rev. THOMAS KNOWLES, D. D.

Dr. Knowles was a native of Ely, and was educated at the grammar-ſchool of that place; whence he was ſent to Pembroke-hall in Cambridge. He was appointed B. A. in 1743, and M. A. in 1747, and was alſo choſen fellow of that ſociety. He was a theologian of great merit, and engaged in points of controverſy without exhibiting any inſtances of harſhneſs or aſperity in his diſputes. He conducted himſelf uniformly with the urbanity of a ſcholar, the politeneſs of a gentleman, and the meekneſs of a Chriſtian. He was juſtly admired as a preacher; his delivery was earneſt and impreſſive; his language nervous and expreſſive; his manner plain and unaffected. To the doctrines of the church of England he was zealouſly attached, without any deſire of odious reſtrictions on the diſſenters from that eſtabliſhment. His works diſcover a great portion of learning, delivered in a ſtyle of purity and perſpicuity. The following is a complete liſt of them: —1. The Scripture Doctrine of the Exiſtence and Attributes of God, in 12 Sermons, with a preface; in anſwer to a pamphlet on the argument *à priori*. 2. An anſwer to biſhop Clayton on Spirit; for which archbiſhop Secker conferred on him the degree of D. D. 3. Lord Hervey's and Dr. Middleton's Letters on the Roman Senate. 4. Obſervations on

the Tithe Bill. 5. Dialogue on the Teſt Act. 6. Primitive Chriſtianity in favour of the Trinity. This was anſwered by Mr. Capel Loft. 7. Obſervations on the Divine Miſſion of Moſes. 8. Advice to a young Clergyman, in ſix letters. 9. The Paſſion, a Sermon. 10. On Charity Schools, on Sunday Schools, and a preparatory Diſcourſe on Confirmation. As a pariſh prieſt, he was not excelled by any member of his order; exemplary in his conduct, perſevering in the duties of his ſtation; blending affability and openneſs with that gravity which ought to be inſeparable from a miniſter of religion; adorning his doctrine by his life, he will be long and unaffectedly lamented by his numerous pariſhioners. Dr. Knowles died at Bury St. Edmunds, of which place he was rector upward of thirty years, in the 78th year of his age. His only daughter was married in 1780 to the Rev. Benjamin Underwood, rector of Eaſt Barnet, and of St. Mary Abchurch, London.

Mr. Joseph Strutt.

Mr. Joſeph Strutt was an artiſt of extraordinary merit, and an antiquarian of great induſtry and extenſive information. He was related to the ancient family of the Strutts of Tarling, Eſſex, and married a daughter of Mr. Blore, of Bocking, who died ſome time back, leaving two ſons, one bred to the profeſſion of a printer, the other a clerk in the bank. He was much diſtinguiſhed for the aſſiduity with which he traced the antiquities of our nation from illuminated manuſcripts, and from them compiled, according to the method of Montfaucon, 'The Regal and Eccleſiaſtical Antiquities of England,' published in quarto, in 1773; alſo, 'Complete Views of the Manners, Cuſtoms, Arms, Habits, &c. of the Inhabitants of England, from the Arrival of the Saxons to the time of Henry the Eighth:' two volumes, quarto, 1774: reprinted in 1796-7. He is likewiſe the author of the 'Chronicle of England,' publiſhed in two volumes quarto, 1777; of the 'Sports and Paſtimes of the People of England,' 1801, quarto; and 'A Biographical Dictionary of Engravers,' that made its firſt appearance in 1785, in two volumes quarto. Mr. Strutt died of an inflammation in the lungs, in Charles-ſtreet, Hatton Garden, on the 15th of October, and in the 51ſt year of his age.

Henry Hunter, D. D.

The Rev. H. Hunter, D. D. paſtor of the Scotch church, London-wall, and ſecretary to the ſociety for propagating Chriſtian knowledge in the Highlands of Scotland, was born at Culroſs, a royal borough in Perthſhire, in 1741. His anceſtors were zealous whigs and preſbyterians, of the old ſtamp, and diſtinguiſhed for their ſenſe and good conduct. His father was a magiſtrate in the borough of Culroſs in the difficult and trying year 1745, when he acted with much firmneſs and moderation. Having paſſed through a regular courſe of education at the college of Edinburgh, he was ordained one of the miniſters of South Leith in 1769. He continued to exerciſe his clerical office in this place till Auguſt 1771, when he was invited to take the charge of the Scotch congregation at London-wall, in which he continued till his death. Dr. Hunter was much beloved and admired by his flock for his amiable qualities, his talents, and literary attainments. He was an elegant preacher, and a writer of conſiderable merit and ability. Though he was a zealous adherent to the Calviniſtic ſyſtem, as ſet forth in the confeſſion of the church of Scotland, framed by the aſſembly of divines at Weſtminſter in 1646, yet he diſcovered no tincture of bigotry, or any thing like that auſterity of manner that uſually characterizes the ſect. He was firſt made known to the world as an author, by the publication of ſingle Sermons on a variety of ſubjects; but his moſt

important work was his 'Sacred Biography,' in three volumes, 1786, and three additional volumes, which came out in 1792. This work has paſſed through ſeveral editions, without any diminution of its popularity. It is written in an eaſy flowing ſtyle, often highly embelliſhed, but not in a degree that deſtroys the force of the ſentiments, or fatigues the attention of the reader. The difficulty of tranſlating the works of an author of any degree of merit, is well known to thoſe who have attempted the taſk, and indeed it is ſuppoſed to require talents not inferior to the writer of the original, yet in this laborious department Dr. Hunter has ſeldom been equalled. His tranſlation of St. Pierre's 'Studies of Nature,' has been univerſally read and admired, and there are few works the ſenſe and ſpirit of which have been ſo ably transfuſed into a different language. The accuracy of his judgment in ſelecting foreign publications for tranſlation, was juſtified by the favourable reception they met with from the public. Among theſe are Sonini's Travels in Egypt, Saurin's Sermons, Caſtera's Life of Catherine of Ruſſia, and Euler's Letters to a German Princeſs. The moſt important and ſplendid of his tranſlations is Lavater's large work on phyſiognomy. The execution of the engravings and the printing is ſuperb, and the merits of the tranſlator have been acknowledged by the writer of the original work. Dr. Hunter paid a viſit to that celebrated philoſopher, and happily found a ſtrong congeniality of ſentiment and diſpoſition with that amiable philanthropiſt. He was much ſhocked with the recital of the barbarous cruelty which terminated the days of the virtuous Lavater.

Dr. Hunter was of a ſpare habit of body, and very active. His cheerfulneſs and good humour did not fail to attend him till within a few days of his death, when an inflammation of his lungs precipitated his diſſolution. He went to Bath, and then to Briſtol, for the benefit of the waters; at the latter place he finiſhed his mortal career, on the 27th of October, in the 64th year of his age, leaving behind him a wife, two ſons and a daughter, who, in common with his other friends and the public at large, unite in regretting the loſs of ſo valuable a member of ſociety.

SAMUEL ARNOLD, Muſ. D.

Dr. Arnold, whoſe profeſſional merit has been ſo juſtly celebrated, received his muſical education at the chapel royal St. James's, under the late Mr. Gates, and partly under his ſucceſſor Dr. Nares. From the ſtrong indications which he gave, even in infancy, of muſical genius, his parents were determined to permit him to follow his natural propenſity, by placing him in ſome reſpectable harmonic ſeminary; and, having a proſpect of patronage from the late princeſſes Amelia and Caroline, placed him, at the uſual age of admiſſion, in the king's chapel. Mr. Gates and Dr. Nares were maſters of conſpicuous eminence, and were well qualified to appreciate and encourage the dawnings of early genius. The former was ſo partial to his promiſing pupil, that he conſtantly diſtinguiſhed him by particular marks of favour, and at his death left him a valuable legacy. About the year 1760, Mr. Beard, of ſinging celebrity, and one of the managers of Covent-garden theatre, became acquainted with Mr. Arnold, and introduced him to the notice of the public as muſical compoſer to that houſe. In this department he gave general ſatisfaction, and judiciouſly adopted his ſtyle of compoſition to the peculiar vocal talents of Mr. Beard. The Maid of the Mill was his firſt attempt of this deſcription, which was honoured with unbounded applauſe. His ſucceſs on this occaſion inſpired him with reſolution to undertake a more arduous taſk, that of compoſing an oratorio. He made choice of the cure of Saul for his ſubject, on which an excellent

poem had been written by the late Rev. Dr. Brown, and brought forward an oratorio on that ſubject in 1767. His ſucceſs was correſpondent to his wiſhes, and his production was conſidered the beſt that appeared ſince the time of the immortal Handel. The author very generouſly made a preſent of this work to the ſociety inſtituted for the benefit of decayed muſicians and their families, which proved to them a very valuable acquiſition, as their funds were in a ſtate of decay, and the receipts of their annual concerts on the decline. The Cure of Saul, however, attracted crouded audiences, and contributed to the reſtoration of that laudable inſtitution. This was followed by the oratorios af Abimelech, the Reſurrection, and the Prodigal Son, which were performed during ſeveral ſucceſſive Lents at the Haymarket and Covent-garden theatres, under his own management and direction. In 1773, he was offered an honorary degree in the theatre of muſic at Oxford, but he preferred the academical mode of attaining that honour, and performed, as an exerciſe, Hughes's poem on the power of muſic. It is uſual on thoſe occaſions for the profeſſor of muſic to examine the exerciſe of the candidate; but Dr. Hayes returned Mr. Arnold his ſcore unopened, ſaying, "Sir, It is quite unneceſſary to examine the exerciſe of the author of the Prodigal Son." In 1771, Dr. Arnold married miſs Napier, daughter of Archibald Napier, doctor in phyſic, with whom he received a handſome fortune. He ſhortly after purchaſed Marybone gardens, which he furniſhed with a ſcenic ſtage, and compoſed ſome excellent burlettas, which were very favourably received. On the death of the late Dr. Nares, in the year 1783, Dr. Arnold was appointed organiſt and compoſer to his majeſty's chapel at St. James's, and, at the performance of the commemoration of Handel, was nominated one of the ſub-directors of that inſtitution, and preſented with the medal which his majeſty permits the ſub-directors to wear as a mark of his approbation. In 1786, he began an edition of Handel's works, which he continued to complete in 118 numbers, containing all his productions except his Italian operas. In November 1789, he was elected director of the academy of ancient muſic, and obtained a great majority of votes over doctors Cooke and Dupuis, in which appointment he has given general ſatisfaction to the academicians and ſubſcribers. He ſucceeded Dr. Hayes in 1796 as conductor of the annual performance at St. Paul's for the Feaſt of the Sons of the Clergy, in which ſituation he has well ſuſtained his high profeſſional character. Dr. Arnold died at his houſe in Duke-ſtreet, Weſtminſter, on the 22d October, and was buried in Weſtminſter-abbey, on the 29th of the ſame month, with great pomp, and attended by a number of reſpectable profeſſional gentlemen.

ENGLISH INDUSTRY.

Mr. Pictet, of Geneva, in his account of a late viſit of three months to Great Britain and Ireland, has aſtoniſhed the people of the Continent with the following exhibition of the power of Engliſh induſtry:—'There is,' ſays he, 'a caſe in which a raw material, value one halfpenny, is raiſed by manufacture to the worth of 35,000 guineas!—This takes place in the art of a watch-ſpring-maker. A pound of crude iron only coſts a halfpenny; it is converted into ſteel, that ſteel is made into watch-ſprings; every watch-ſpring is ſold for half-a-guinea, and weighs only one-tenth of a grain. There are in a pound weight 7000 grains; it, therefore, affords ſteel for 70,000 watch-ſprings.—The value of all theſe, at half-a-guinea each, is 35,000 guineas.

IMPERIAL PARLIAMENT.

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HOUSE OF LORDS.

Friday, May 13.

LORD ELLENBOROUGH begged to draw the attention of the houſe to a bill he was anxious to have introduced immediately; the purport of it was, to bring to trial all perſons who might be acceſſary in ſinking veſſels, for the purpoſe of defrauding the underwriters. It was already made a felony by an act of parliament, but that act did not point out under what juriſdiction they were to be tried; the conſequence of which was, that two perſons had been liberated, the judges being of opinion their conviction was null, although the inſtrument, and probably the leaſt criminal, had been executed for the offence. The bill alſo went to remove ſome difficulties in trials for the charge of murder, wherein a general verdict was obliged to be given, although the leſſer crime of manſlaughter might appear to be the fact. The bill was then read a firſt time.

Monday, May 16.

The houſe received a meſſage from his majeſty, ſtating the termination of the diſcuſſions between this country and France (See our Magazine, page 392).

Tueſday, May 17.

The royal aſſent was given by commiſſion to thirty-ſix public and private bills.

Monday, May 23.

The order of the day for taking into conſideration his majeſty's meſſage being read,

Lord PELHAM moved an addreſs of thanks (See our Magazine, page 392).

The duke of CUMBERLAND, anxious not to give a ſilent vote on ſo momentous a queſtion, proceeded, in a very neat ſpeech, to ſtate the various inſtances of bad faith manifeſted by France, ſince the treaty of Amiens. In reſiſting the ſpirit which had been ſhewn by the firſt conſul, he hoped that miniſters would be ſupported by the unanimous ſenſe of parliament and the country. If the purpoſes of the firſt conſul were ſuffered to be matured, their lordſhip's rights of nobility would be aboliſhed, the altars of their religion would be overturned, and the deareſt privileges of the Britiſh conſtitution would be loſt for ever. The unanimity of their lordſhips would have its due effect on the people, who would feel that it was their intereſt to ſtand or fall with them. Even the people of France muſt feel that they were now entering into a war of a very different complexion from that from the calamities of which they had but recently been delivered. They were then impreſſed with the idea, that they were fighting in the cauſe of liberty; they muſt now be convinced that they are again to encounter all the horrors of war, merely to gratify the ambitious views of the man who is placed at the head of their government. His royal highneſs concluded a ſpeech which drew forth repeated teſtimonies of applauſe, with giving his cordial aſſent to the addreſs.

Lord STANHOPE ſaid, that the noble ſecretary endeavoured to impreſs upon the houſe that Malta was not the real ground of war; whereas upon looking at the correſpondence [*here, and throughout his ſpeech, his lordſhip quoted the printed papers on the table*], he found that the moſt material points of difference was that very iſland. Now, upon this part of the ſubject he would go a great deal further than miniſtry. He would not only ſay, that we ought to have had Malta for a term of years, but that it ſhould have been ours for ever; that they ought never to have conſented to its ſurrender at any period, nor upon any condition. But having ſaid this, he would further ſay, that if we had ſolemnly agreed to deliver it up, every conſideration of national honour, every dictate of good faith required that ſuch ſtipulation ſhould be carried into complete execution. The fault was in the treaty itſelf. It was too late, after it was once entered into, to come down to that houſe, and juſtify its non-execution by a reference to the views of Bonaparte. Did they not know what his views were? Did they not know that an eſſential ſtep to thoſe views was the acquiſition of Malta?—Proceeding to the next ground of miſunderſtanding between the two governments, viz. the complaints reſpecting the conduct of the Britiſh government, he there diſcovered the ſame miſconception on the part of miniſters, as on the point to which he had juſt alluded. He truſted no one could ſuſpect him to be an enemy to the liberty of the preſs, or that he could encourage any attempt on the part of a foreign power to preſcribe what laws we ſhould paſs on that, or any other of our domeſtic inſtitutions. He would ſooner ſuffer death by the moſt exquiſite torments, than he would

conſent to the ſlighteſt infringement on it. His attachment to this invaluable part of our conſtitution he had, in the ſtrongeſt manner, teſtified in a pamphlet written expreſsly in ſupport of it. But with all this feeling, he muſt explicitly ſtate, that, in his opinion, the Britiſh preſs had, in its remarks on the conduct of the French government, gone far beyond the bounds of prudence and decorum. He was now in the hearing of ſome of the moſt enlightened lawyers who had ever been raiſed to a ſeat in that houſe, and they would no doubt correct him, if he ſhould have taken up a wrong idea on this ſubject. The rule of conduct which he would adopt was, that whatever might be legally ſaid of our own government, might be ſaid of other governments; but that whatever could be fairly denominated a libel with reſpect to the former, ſhould be equally held a libel with reſpect to the latter. To prove that ſuch was the legal conſtruction of libels, in regard to foreign powers, his lordſhip referred to the proſecutions for libels on the queen of France and the emperor Paul. It ſtruck his mind, that it was only by a ſimilar courſe of proceeding that the French government wiſhed miniſtry to reſtrain the licentiouſneſs of the preſs. If they apprehended that any thing more could have been intended, they ought to have put the queſtion in ſo direct a manner, as to receive a diſtinct anſwer from the French government; and did that government explicitly ſtate that we ſhould new model our laws; that we muſt give up the moſt valuable of our privileges?—Had he been in the ſituation of lord Whitworth, or any of his majeſty's miniſters, he would no longer talk about Malta, which, compared to an inſult of ſuch magnitude, would ſink into abſolute inſignificance; he would inſtantly break off the negociation, and order the cannon of our ſhores to roar defiance in the teeth of Bonaparte. Miniſters had choſen a different courſe, and leaving this ſubject, proceeded to higgle about Malta, in a ſtyle which was truly ridiculous After they were fully aware of its importance; after they ſeemed to think that on its ſtill remaining in our hands, depended the total excluſion of the French from Egypt, and the ſafety of our empire in India, they propoſed that they ſhould retain it—*for ever!* No, but for *ten years!* Were we then to have a leaſe of India for ten years? At the end of that period was Bonaparte to enter into the undiſputed poſſeſſion of Malta, to ſeize upon Egypt, and to enſure the means of ſubjugating India? The ſuppoſition was too ridiculous for any one to imagine that it could have been in their contemplation. Yet ſuch was the fair inference which muſt be drawn from their reaſoning compared with their conduct. There undoubtedly were means of providing for the ſafety of India, were there even 100,000 French troops landed in Egypt. But he deſpaired of ſeeing thoſe means adopted. He ſat down with obſerving, that believing the addreſs to be founded on a miſtake, he ſhould be doing violence to his conſcience were he to vote in ſupport of it.

The duke of CLARENCE ſtated the grounds on which he had ſupported the peace of Amiens, though it did not ſtipulate for two of the objects which he had moſt at heart, the ceſſion of Malta to this country, and the reſtoration of the king of Sardinia. Notwithſtanding this diſappointment, he conſidered the treaty, on the whole, as both honourable and advantageous, and ſuch as, had the French government manifeſted the ſame ſincerity with his majeſty's miniſters for carrying into effect, in its ſpirit as well as in its letter, might long have preſerved the bleſſings of peace to both countries. He truſted, that the iſſue of the preſent conteſt would ſo chaſtiſe the inſolence of the rulers of France, that they would not only retract their boaſt, that England could not fight France ſingle handed, but feel convinced, that with reſpect to the foreign poſſeſſions of them and their vaſſal ſtates of Spain and Holland, we had it amply in our power to retort upon them the ſame language and conduct which they adopted with reſpect to us in regard to our intercourſe with the continent.

Lord MULGRAVE, after ſome alluſion to the opinion which he had held on the ſubject of peace, juſtified miniſters from the cenſures of lord Stanhope. He ridiculed the idea of our purchaſing Malta by the ceſſion of Jerſey and Guernſey; iſlands which had for ſo many centuries conſtituted an integral part of the Britiſh empire, and which had always manifeſted, and never more than during the late arduous conteſt, the moſt loyal and zealous affection for our intereſts, and the ſtrongeſt ſenſe of the advantages which they derived from the protection of the Britiſh crown. In the remonſtrances which had been made relative to Switzerland, Holland, Malta, and the various other topics of complaint on our part, he conceived that miniſters had exhauſted every means

of conciliation before they made an appeal to the deciſion of the ſword. On theſe grounds he felt himſelf bound by his duty to his ſovereign, his country, and his conſcience, to concur in the addreſs.

Lord MELVILLE roſe, in order to remark, that the few obſervations he meant to bring before the notice of their lordſhips had, in a great meaſure, been anticipated by the very able and eloquent ſpeech of the noble lord who had juſt ſat down. It had not been contended by any noble lord that Egypt was not eſſential to the intereſts of this country, in whatever light it might be viewed. That point being admitted, no noble lord had in any manner argued, or even ſo much as attempted to argue, that Malta was not equally eſſential to the preſervation of poſſeſſions in the Eaſt, as affording a key to Egypt. With reſpect to that iſland, no guarantee for it had yet been found, as was ſtipulated by the treaty of Amiens. Would it be proper to have recourſe to Pruſſia, Spain, or Auſtria, as guarantees? No. The firſt is by local ſituation incapable of ſuch a truſt; the ſecond is under the controul of France; and the third, in the preſent ſituation of affairs, cannot interfere with any effect. Malta, therefore, could only be guaranteed by Great Britain and Ruſſia united; but it would appear from the feeble manifeſtation of that power, that by a Britiſh garriſon alone the point could be attained. In conſidering the papers, he perceived many difficulties; and the difficulties which appeared to have been moſt prominent, were thoſe whereby this country, by the treaty of Amiens, was to cede and give up the iſland of Malta. It had already been proved, that by the poſſeſſion of Malta the French government had over-run Egypt, and carried their arms to the eaſtern regions; but it had alſo been rendered manifeſt, that by quitting poſſeſſion of that important ſtation, the Britiſh nation had undertaken the gigantic enterprize of driving the French from Egypt. While therefore Malta remained in the cuſtody of Great Britain, it was wholly impoſſible that the French power could attempt to undertake any enterprize which could tend, in the ſmalleſt degree, to overturn the dominion of England on that iſland. Malta is a place of great ſtrength, in the Mediterranean, for this country, becauſe the various powers, petty ſtates, and dependants, in the Adriatic and in the Levant, will be taught that England is their only ſtay. The 10th article of the treaty of Amiens, and indeed the whole of that treaty, was now therefore to be conſidered as ſo much dead letter. He wiſhed particularly to impreſs upon their lordſhips, that if Malta was the avowed object of the war, that it ſhould be ſo ſtated. Let the country hear no more of the order of St. John of Jeruſalem, but let a Britiſh garriſon for ever protect and garriſon that iſland. He congratulated the houſe upon the circumſtance of all the ſtruggles being at an end relative to that poſſeſſion, as now it was blended, and had in fact become a poſſeſſion of ſingular importance, annexed to the authority and conſequence of the Britiſh empire. When the forces of his majeſty firſt landed on that iſland, the order of St. John had been degraded and inſulted, and their honours had been tarniſhed; and even now, it would be a hard queſtion to propoſe to the Malteſe people, whether they would wiſh to live under the Malteſe order, or under the government of France. When the Britiſh forces came to Malta, the Malteſe had blockaded the French in the Valetta, and it now would be peculiarly ſevere were they again to be put under their former maſters. The order of St. John did no more exiſt, and nothing certainly could prevent this country from aſſerting and maintaining our right to the iſland. His lordſhip therefore wiſhed to hear no more of any conteſt reſpecting Malta, between England and any other power; as the Malteſe and this country would ſuite and arrange the various branches of the government among themſelves. The noble lord concluded by ſaying, that this country, in his opinion, was to retain and keep Malta in perpetuity as its guarantee; and upon that ground he would cordially ſupport the motion for an addreſs to his majeſty.

The marquis of LANSDOWN argued on ſeveral points of diſcuſſion which had been ſtated by noble lords before he roſe. With reſpect to Switzerland, ſurely Auſtria could not interfere; neither could it be preſumed that Auſtria would interfere in the annexation of Parma and Placentia to the French power. Even the report of Sebaſtiani was not a legitimate cauſe of war, becauſe there was no ſtate in Europe which did not employ emiſſaries to collect every information upon every ſubject. His lordſhip dwelt at ſome length upon theſe points.

Lord KING, after a ſpeech of ſome length, moved an amendment on the original motion, for an addreſs, to the following effect: "To aſſure his majeſty of

the co-operation of the houſe in the vigorous proſecution of the war; but at the ſame time to aſſure his majeſty, that the houſe was anxious to ſupport him in any arrangement which might be entered into for bringing the preſent diſpute to an amicable termination.

Lord ELLENBOROUEH oppoſed the amendment in a very animated ſpeech.

In the further progreſs of the debate, the original addreſs was ſupported by lord Moira, lord Roſslyn, the marquis of Sligo, and lord Grenville; and the amendment by the duke of Norfolk, lord Darnley, and lord Gwydir.

The houſe having then divided on the amendment, it was loſt by a majority of 242 to 10, after which the original addreſs was carried.—Adjourned.

Tueſday, May 23.

Lord AUCKLAND moved, that there ſhould be laid before the houſe copies of communications relative to Louiſiana, and of the orders and counter-orders ſent to the Britiſh commanders at the Cape of Good Hope, and in the Weſt India iſlands.—Ordered.

Wedneſday, May 25.

Lord HOBART delivered a meſſage from his majeſty, ſtating his determination to employ all the means in his power to fruſtrate the deſigns of the enemy, and to protect the intereſts of his people. In purſuance of this reſolution it was his intention immediately to call out the ſupplementary militia; and that he might be enabled to do ſo, he, in the terms of ſeveral acts of parliament, made the preſent communication to the houſe of lords.

Lord Hobart moved an addreſs of thanks for his majeſty's communication. The motion, after a few obſervations from lord Radnor, was agreed to.

Friday, May 27.

Twelve public and private bills received the royal aſſent by commiſſion.

Saturday, June 11.

The royal aſſent was given by commiſſion to the bill for the better defence of the kingdom, to the ſupplementary militia bill, to the Scotch ſchool maſter's bill, to the Scotch emigrant bill, and to a variety of private bills.

Friday, June 17.

Lord PELHAM delivered a meſſage from his majeſty, ſtating, that he had ordered letters of marque and general repriſals to be iſſued againſt the ſubjects of the Batavian government.—An addreſs of thanks was voted to his majeſty for this communication *nem. dis.*

Saturday, June 18.

Lord HOBART delivered the following meſſage from his majeſty:

GEORGE R.

His majeſty thinks proper to acquaint the houſe of lords, that, for the more effectual defence and ſecurity of the united kingdom againſt the avowed deſigns of the enemy, he deems it neceſſary to reſort to ſuch means as are beſt calculated for a vigorous proſecution of the war; and, for this purpoſe, that a ſtrong additional force ſhould be forthwith raiſed and aſſembled. His majeſty, therefore, recommends this ſubject to the conſideration of the houſe of lords, and relies, with confidence, on the zeal and public ſpirit of their lordſhips, that they will concur in the adoption of ſuch meaſures as ſhall appear to them moſt effectual for theſe ends, and for carrying the ſame into execution with the leaſt poſſible delay.

HOUSE OF COMMONS.

Monday, May 16.

Mr. ADDINGTON, brought down a meſſage from his majeſty to the ſame effect with that given in our Magazine, p. 392.

Tueſday, May 17.

The SPEAKER ſtated, that the royal aſſent had been given, by commiſſion, in the houſe of lords, to the Iriſh revenue bill, the Iriſh bank reſtriction bill, to the Nottingham election bill, and to a variety of private acts.

In a committee of the houſe for affording commercial facilities,

Mr. ADDINGTON ſaid, that having ſtated on a former occaſion the general principles of the conſolidation of the duties of cuſtoms, it was now his duty to call the attention of the committee to the ſchedule. It is propoſed to make very great alterations in the ſchedule, by encreaſing the duties on ſome articles, and by diminiſhing them on others. It was propoſed to augment the duty on the exportation of wine from Great Britain, and to decreaſe the duty paid on its importation; for ſeveral years back, wine imported into London was ſubject to an additional duty of 11 10s per pipe, more than wine carried into any other port. The conſumption of wine had very much encreaſed in the metropolis, and it was intended, that wine ſhould not be ſubject to a higher duty in London than elſewhere. In the book of rates it would be found, that the duties payable on ſkins and furs imported, were not at all adequate. On this part of the ſchedule it was intended to

propoſe, that the duties ſhould be in proportion to the value of the articles imported. It was alſo propoſed to encreaſe the duty upon all wood imported, except ſhip timber. Upon chymical oils an additional duty would alſo be laid; but upon thoſe extracted from ſpices, and manufactured at Ceylon, no encreaſe ſhould take place, as it was highly deſirable every encouragement ſhould be given to the cultivation of ſpices in that ſettlement. There was another article which the committee might think a ſtrange one, upon which he intended to propoſe an additional duty of five per cent. *ad valorem*, and that was on diamonds and precious ſtones.—A diminution was intended to take place on the duties payable on unmanufactured articles from India, from 45 to 25 per cent.—On manufactured articles, from 71 to 51 per cent.—China-ware from 109 to 50 per cent.—On drugs, a diminution from 78 to 50 per cent.; and of Japan-ware, from 119 to 50 per cent.—With reſpect to Eaſt-India goods, it was intended they ſhould be reduced to a rated duty ſimilar to the duties on articles imported from other countries, with ſome exceptions. It was intended to impoſe an additional duty of 2s. on all ſugar imported from India. This would give the article a mart without giving it any invidious preference to the ſugar from the Weſt-Indies. The duty on Indigo was alſo to be reduced. All unenumerated articles would be charged 20 per cent. *ad valorem* inſtead of 32. Cotton wool imported from the plantations would be charged at the rate of 1d per lb. while that from other parts would be ſubject to a duty of 1½d. per lb. The great object of the meaſure was to prevent the practice of ſmuggling; there were two articles wherein the contraband trade had been amazingly ſucceſsful, namely, lace and Bandana handkerchiefs. The duty on the former was propoſed to be raiſed to 20 per cent. as at the very utmoſt the profit of the ſmuggler was not above 12 or 13 per cent. An immenſe importation annually took place of Bandana handkerchiefs. The ſmuggler could inſure them at 18 per cent. but he meant that it ſhould be augmented to 25 per cent. with two per cent. additional for warehouſing. It was alſo propoſed to reduce the duty on the importation of hemp from America and the Eaſt Indies, for our naval purpoſes, in order that the country might never, if poſſible, have to rely on any foreign market for ſupplies. It was likewiſe propoſed to reduce the duty on Italian and nonenumerated wines, in order to afford encouragement to a new branch of trade in the Mediterranean. It was likewiſe intended to take off the duty on linen-yarn to 6s per cwt.—With reſpect to the propoſed duty on tonnage, he underſtood that it would not be objected to in the preſent ſituation of the country; but at the ſame time the merchants lay in a claim to have it taken off, through their preſent acquieſcence, but it was impoſſible to deny the great increaſe in the navigation of the country for the laſt fourteen years. Theſe had been years of progreſſive increaſe, and he would only ſtate the increaſe of the laſt.—Increaſe of veſſels cleared out, 3275; tonnage 414,735. Decreaſe of foreign ſhips 1704; tonnage 299,514. Increaſe of imports—ſhips 2730; tonnage 269,245. Decreaſe of imports by foreign ſhips 3274; tonnage 344,625. Having enlarged upon this increaſe, Mr. Addington ſaid, that if a bill, founded upon the reſolution he meant to propoſe, was paſſed, it was intended to publiſh a ſchedule of all the duties to be paid at the Cuſtom houſe, which would alſo be tranſlated into all the European languages, and that at the end of every ſeſſion of parliament, the various alterations made on the duties would alſo be printed and publiſhed. He concluded by moving a reſolution, that the ſeveral duties and cuſtoms now payable do ceaſe and determine, and other duties be paid in lieu thereof.

General GASCOIGNE made a few remarks on Mr. Addington's ſtatement, which he ſaid he ſhould enlarge upon when the bill came before the houſe. The queſtion was then carried.

Monday. May 23.

For an account of the proceedings of this day, ſee our Magazine, page 392.

Wedneſday, May 25.

Mr. ADDINGTON brought down a meſſage announcing his majeſty's intention of immediately calling out and embodying the ſupplementary militia.

Thurſday, June 2.

Sir FRANCIS BARING brought in a bill for erecting wet docks at Blackwall, for the accommodation of Eaſt India ſhipping, which was read the firſt time.

The convoy bill was read a third time and paſſed.—On a queſtion being put from general Gaſcoigne, if the bill was to extend to Ireland, Mr. Vanſittart replied in the affirmative.

Friday, June 10.

The houſe went into a committee of ſupply. A reſolution was moved, grant-

ing 40,000 additional ſeamen, including 8000 marines, for the ſervice of the navy, for ſeven lunar months from the 12th of June—518,000l was voted for wages; 533,020l for victuals; 840,000l for wear and tear; 70,000l for ordnance; 100,000l for hiring tranſports; 65,000l for priſoners of war; 20,000l for ſick priſoners of war; and 24,900l for the barrack department of Ireland. A reſolution was alſo agreed to, making proviſion for the pay and cloathing of the militia of Ireland. The report was ordered to be received to-morrow.

BUDGET.

Monday, June 13.

The CHANCELLOR of the EXCHEQUER roſe to move the order of the day for going into a committee to conſider further of the ſupply to be granted to his majeſty. The houſe accordingly reſolved itſelf into a committee.

The chancellor of the exchequer then roſe, and ſpoke in ſubſtance as follows:

As it will be neceſſary for me, ſir, to treſpaſs for a conſiderable time on the patience and indulgence of the houſe, I ſhall occupy the attention of the committee with as few preliminary obſervations as poſſible. The obſervations which I ſhall introduce will be thoſe only which neceſſarily and naturally ariſe out of the official duty which I am called upon to perform. I ſhall abſtain from entering into any minute detail of the circumſtances in which the country is now placed. Suffice it for me to ſtate that a very large majority of the houſe agreed in an addreſs to his majeſty, expreſſive of their approbation of the grounds of the preſent war, and their determination to ſupport his majeſty in proſecuting it with energy and vigour. By this addreſs, ſir, the houſe was pledged to ſupport his majeſty in calling forth the reſources of the country, in ſupporting the honour of his crown, and maintaining the rights of his people. It is under theſe conſiderations that I now propoſe to addreſs the committee at the preſent moment. The houſe has already declared their approbation of the war, and their conviction of the neceſſity of great and extenſive ſacrifices in proſecuting it with advantage and with honour. Having made ſuch a declaration of the cauſe, the objects and the character of the war in which we are engaged, I have a fair right to ſuppoſe that a pledge of this nature was not given without due conſideration. I have a right to contend, that a pledge of ſo ſerious and ſo important a deſcription was not given on light grounds, or without adequate attention to the conſequences which it involved. I have a right to preſume that in carrying up ſuch an addreſs to the foot of the throne as that which was lately preſented by this houſe, we pledged ourſelves in the moſt ſolemn manner to the ſupport of all thoſe meaſures of preparation, to all thoſe great and extenſive ſacrifices which the nature of the conteſt in which we are engaged neceſſarily requires. That great efforts will be neceſſary all parties allow. I underſtood, ſir, that while this was allowed it was equally implied that theſe exertions would not be of a tranſient deſcription. The pledge which was given by this houſe was, that we were ready to ſubmit to great and extenſive ſacrifices, not during a conteſt, the termination of which might be expected to be ſpeedy, but that our minds were made up to extraordinary privations—to privations affording the means not only of vigorous exertions for a ſhort period, but of an arduous and protracted ſtruggle. This, ſir, I conſider was a determination not merely what prudence required, but it was a determination in all points of view worthy of the magnanimity, the fortitude, and the wiſdom of a great and a powerful people. It is with reference to ſuch conſiderations and ſuch views that I riſe to propoſe the plan which I ſhall have the honour of ſubmitting to the committee. Having explicitly ſtated the grounds on which I come forward to propoſe the plan which appears to me the beſt adapted to provide for the wants of the public ſervice at the preſent important criſis, I have only now to requeſt the indulgence of the committee while I ſtate what have been the ſums voted for the public ſervice, and what are the means by which I propoſe that the ſums neceſſary to cover theſe votes ſhall be raiſed.—Mr. Addington then ſtated that the ſupplies were for the navy, excluſive of ordnance for the ſea ſervice 10,021,000l; the army 8,721,849l; army extraordinaries, which would be the ſubject of a diſtinct vote on a future day, 2,000,000l; army extraordinaries incurred in the preceding year, and not yet provided for, 1,032,151l, making a total for the army of 11,754,000l, excluſive of the eſtimate for the ordnance of the army, amounting to 1,280,000l. It was further intended to apply for a vote of credit for England and Ireland, to the amount of 2,000,000l. For defraying bounties upon corn, there would be required 524,000l, and for various articles which came un-

der the head of miſcellaneous ſervices 1,300,000l. By adding theſe different ſums, the committee would find that the total of the joint charge for England and Ireland was 26,879,000l. To this there remained to be added, as a ſeparate charge upon Great Britain, to make good the deficiency on the produce of the malt duty in 1801, 118,840l; to make good the deficiency of ways and means in 1802, 171,431l; to enable the commiſſioners appointed under the laſt treaty with America, to carry into effect their awards in favour of American ſubjects, 330,000l to pay back to the Eaſt India company certain ſums advanced for the accompliſhment of expeditions undertaken by order of government, and upon which there certainly was a very conſiderable balance due to them, 1,000,000l; to pay off exchequer bills voted in the preſent ſeſſion, 2,781,000l; to which were to be added for intereſt and management, 920,000l; to pay off exchequer bills iſſued on the credit of the aids of 1798, and now in the poſſeſſion of the bank, 1,500,000l. Theſe different ſums made the whole of the ſeparate charge 6,821,679l, and joining this total to the amount already ſtated under the different heads of ſervice, the total of the ſupplies to be provided for would ſtand at 33,700,679l.—From this ſum was to be deducted the 2-17ths of the joint charge (26,879,000l) to be contributed by Ireland, being 3,162,233l, which, with the ſum of 140,224l, the proportion of Ireland for the ſupport of the civil liſt, and ſeveral miſcellaneous charges, would make the whole of the deduction on account of Ireland 3,302,459l, leaving a total to be provided for by England of 30,398,220l. He ſhould now have to call the attention of the committee to the ways and means for the raiſing this amount. For this purpoſe he would, in the firſt inſtance, take credit for the produce of the duty upon malt, penſions, &c. eſtimated at 2,750,000l. Before the Eaſter receſs it would be recollected, that a vote had paſſed for four millions of exchequer bills on the aids of 1804. The ſums iſſued, however, were one million leſs than the amount of the vote; ſo that there remained only three millions applicable to the ways and means of the preſent year. The next head of the ways and means was the ſurplus of the conſolidated fund. He had ſtated before the receſs, that he felt himſelf juſtified in propoſing to vote the ſum of 6,500,000l, as the growing produce of the conſolidated fund. That the expectation which he then formed was founded on the moſt ſolid baſis, was now clearly proved by the actual accounts on the table. He would therefore, at preſent, take credit for that amount. As it was not uſual to aſk for a vote upon this particular the ſame evening on which the general outline of the ways and means was ſubmitted to the houſe, he would not now fatigue them with ſtating the various circumſtances which juſtified him in eſtimating the ſurplus at ſo great a ſum, but would leave the grounds of his calculation to form the ſubject of future diſcuſſion. The committee were aware that the public was indebted to the bank one million five hundred thouſand pounds for advances made on exchequer bills in 1798, which advances the bank had ſince continued by ſucceſſively taking up exchequer bills to the ſame amount. He entertained a hope, that the ſame conſiderations which induced the bank to make this advance in 1798, would diſpoſe the directors to extend the accommodation to a longer period; but as he was not authorized to ſpeak with confidence on this point, he would ſuppoſe that it would be neceſſary to iſſue 1,500,000l in exchequer bills to diſcharge their claim. He would, in the next place, propoſe to apply to the ways and means a ſum of 37,782l, being the amount of balances remaining in the exchequer, of grants for bounties on hemp and flax. It was alſo intended to raiſe a ſum by way of a lottery, the produce of which, though a contract had not yet been entered into, he might fairly eſtimate at from three to four hundred thouſand pounds; he had in fact taken credit for the latter ſum. He would next propoſe the uſual vote of credit of two millions. He had now come to thoſe taxes from which the revenue might be expected to derive the moſt conſiderable augmentation, namely, thoſe which were to be levied under the heads of exciſe and cuſtoms. Thoſe, as well as the impoſts which he intended to propoſe upon various deſcriptions of property, were to be conſidered as war taxes, and they were not to determine until ſix months after the concluſion of a definitive treaty of peace. Conſidering the advantages which war was likely to give the Weſt India merchants and proprietors, he thought that there could not be a fairer object of taxation than the article of ſugar, of which they might be expected during the continuance of hoſtilities to have almoſt an entire monopoly. In the act now on the table for conſolidating the cuſtoms, he would pro-

poſe to introduce a clauſe, adding a duty of 12½ per cent. on all other imports, with the exception of cotton wool, tea, and wine, which were to be objects of ſeparate taxation.—The produce of this branch of revenue he would eſtimate at one million three hundred thouſand pounds. As the manufacturers of this country might alſo be expected to enjoy nearly the ſame advantages with the claſs juſt alluded to, there could be no reaſonable objection to a war tax upon the exportation of their productions. He would therefore propoſe a duty of one per cent. *ad valorem* on the exports to any part of Europe, and of three per cent. on the exports to all other parts of the world. The produce of this tax he calculated at 460,000l. He had, on a former occaſion, ſtated, that, in the arrangement for conſolidating the cuſtoms, he ſhould propoſe to encreaſe the duty on cotton wool imported to 1d per pound; this was expected to yield a ſum of 250,000l. It had been generally admitted, that during a period of war, the tonnage of ſhipping was a fair ſubject of taxation. It was therefore propoſed to renew this tax, as it exiſted toward the concluſion of the late war, at which period it produced the ſum of 250,000l. The whole of the encreaſed revenue, derivable from the cuſtoms, would thus amount to 2,160,000l. He would, however, deduct the 160,000l, which would certainly cover any errors in the eſtimate, and take credit only for two millions. The next branch of the revenue, from which a very conſiderable encreaſe might be fairly expected, was the exciſe. Under this head he did not mean to make any addition to the duties on the ſmaller articles of conſumption; but he had ſelected four principal objects; the firſt was the article of tea. Independently of any additional duty an encreaſe might be expected on this article from the interruption of ſmuggling during the war. That circumſtance would alſo remove any fear which might otherwiſe be entertained of encouraging ſmuggling by raiſing the price. It was therefore his intention to propoſe an additional duty of 15 per cent. *ad valorem*, on the coarſer kinds of tea, and 45 per cent. on the finer teas. This addition, large as it might appear, would not raiſe the price of the finer teas higher than they were before the commutation act took place, and the coarſer kinds would ſtill remain lower than they were at that period. The amount of this encreaſed duty he would take at 1,300,000l. On the article of wine, which was the ſecond object he ſelected, he conceived there would be no objection to ſome additional duty. Notwithſtanding the addition of ten pounds per ton impoſed in 1795, the conſumption, inſtead of diminiſhing, had very conſiderably increaſed. He ſhould now propoſe a ſimilar duty of ten pounds per ton, or five pounds per pipe, the produce of which might be eſtimated at five hundred thouſand pounds. The third article of taxation was foreign and home made ſpirits, the duty on which, at preſent, was five ſhillings and two pence per gallon. He ſhould propoſe an additional duty of half that amount, or, in other words, an increaſe of fifty per cent. on the preſent duty, which he expected to yield an increaſe of 500,000l. The next branch of revenue to which he meant to apply for an increaſe, was one which he ſhould mention with great reluctance, but he felt that he ſhould not do his duty to his country if he ſhrunk from the obligation impoſed upon him at this intricate juncture of affairs. He felt that he ought not to deſiſt, at ſuch a criſis, from recommending a mode of reinforcing the public revenue, though it ſhould even be productive of great inconveniences in quarters where he was moſt reluctant that any inconvenience ſhould be experienced. He was confident that the great maſs of the community felt the juſtice of the cauſe in which the country was engaged, and were therefore convinced of the neceſſity of making great ſacrifices. The object to which he alluded was malt. Having here adverted to the ſtate of the brewing buſineſs for ſome years paſt, he ſtated that he ſhould propoſe a duty of 2s per buſhel on this article, the produce of which he would take at 2,700,000l, making an addition of 200,000l to that of laſt year. It was, at the ſame time, his intention to propoſe a duty of 13d per barrel on beer, which, however, from the effect of certain allowances in the brewing trade, would be reduced to 8d per barrel. Conſidering the profits which brewers now enjoyed, he hoped that the additional duties would not have the effect of raiſing the price of their commodity to the conſumer.—But, even if that ſhould be the effect in a ſlight degree, he wiſhed the lower orders of the people to reflect, that while upon their beverage, from the year 1763, a period of forty years, the encreaſed price had been only 45 per cent. the additional duty on wine and ſpirits had actually been 200 per cent. Taking this view of the ſubject, they could not impute it to parliament

that, while the burthens of the poor were increaſed, they had ſpared themſelves, and the higher orders of ſociety. The total of the increaſed revenue to be derived from the exciſe would be found to amount to ſix millions.—In addition to the branches of revenue already ſtated, he had now to ſubmit a meaſure very extenſive in its operations; it was founded on the income tax, which, however condemned by ſome perſons, he had ever contended was a great inſtrument of ſupporting public credit, and carrying the public ſafe through a period of unprecedented difficulties. There would, however, be objections to this, as there were to every other meaſure of finance. The principal objection to the income tax was the diſcloſure of the circumſtances of individuals. This inconvenience, which could not be altogether avoided, was in the preſent inſtance contracted within the narroweſt poſſible limits. The outline of the meaſure was, that it made a diſtinction between property, the value of which to the proprietors did not depend on the improvements of ſkill and induſtry, and property of contrary deſcription. On the dividends ariſing from money in the funds, he ſhould alſo propoſe a tax of one ſhilling in the pound. He ſhould alſo propoſe the ſame ſum on on the net rent accruing to the proprietors of land. On the rents of tenants in England, it was his intention to levy ninepence in the pound, and on thoſe of the ſame claſs in Scotland, ſixpence. The right hon. gentleman here entered into a variety of calculations relative to the amount of income of a permanent deſcription; the reſult of which was, that it might be taken at eighty millions, of which there would be aſſeſſed under the preſent meaſure a capital of from ſixty to ſeventy millions. Taking it at 67,500,000l, the produce of 1s. in the pound would be 3,375,000l. That of the tax on tenants he eſtimated at 500,000l; on ſalaries and profeſſions at 400,000l; on the profits of trade at 625,000l; making in all, under this head, 4,700,000l. The grand total of the new taxes he ſtated at 12,500,000l; but as the whole of this ſum could not be ſuppoſed to be forthcoming for the immediate ſervice of this year, he took, as the probable amount of the returns within that period, the ſum of 4,500,000l. To make good the total of the ſupplies, a loan of ten millions had therefore been contracted for on account of England, and of two millions for Ireland. The terms on which the loan had been taken, were for every 100l, 80l in the three per cent. conſols, 80l in the three per cent. reduced ſtock, and 6s 6d of long annuities. Theſe, at the market price of the day, amounted to 101l 6s 6d. The bonus was 1l 6s 6d, and the intereſt 5l 2s 3d per cent. The intereſt, with the charges of management of the ſtock created by the loan, amounted to 6,076,583l, the means of defraying which were an increaſe from the conſolidated cuſtoms, 250,000l, an increaſe from the conſolidated aſſeſſed taxes, 220,000l, increaſe from a change in the collection of the ſtamp duty of 220,000l, making in all 690,000l.—Upon the terms of the loan which had thus been concluded, he had to congratulate the committee and the country at large. Very few inſtances had occurred where they had been ſo very favourable, or where bargains of the kind had redounded ſo much to the advantage of the public. The bargain of laſt year was highly favourable, but he ſhould not detail the circumſtances under which it had been concluded, they were obvious to every gentleman, becauſe the laſt was a year of peace. There were only two years that he recollected for a long ſeries of time where the bargains had been ſo much to the public advantage as at preſent, namely, 1799 and 1800, when they had been ſo favourably concluded. But under what circumſtances were theſe contracts concluded. The firſt was under the ſevere operation of raiſing the ſupplies within the year; and the ſecond took place in the arduous and ſevere preſſure of the high price of proviſions, and the operation of the income tax. The fact was, however, indiſputably proved to be this, that the confidence theſe meaſures inſpired, did lead to theſe advantageous bargains. This encouragement certainly held out an inducement to his majeſty's government to reſort to the practice of thoſe years. Here the right hon. gentleman recapitulated the ways and means, which he ſaid would leave a ſurplus of 289,621, excluſive of the ſum at which he eſtimated the lottery, which was 400,000l. It was propoſed that in all inſtances where money was to be paid, that the perſon paying ſhould be entitled to demand a ſtamped receipt for the ſame, in no inſtance to be lower than twopence, or higher than five ſhillings. No inconvenience whatever could be poſſibly felt from this meaſure; on the contrary, as it would tend to every man's ſecurity, no objection could me made to it. The produce of this he ſhould eſtimate at 220,000l, which, with the above

690,000l, would be applicable to the intereſt of the loan.—From what he ſtated, the committee would have no difficulty in perceiving that the great object he had in view was to raiſe the ſupplies within the year, in order that during the war no accumulation to the public debt ſhould take place.—This was his object, and he had another equally important in view, namely, that the country ſhould eſtimate the produce of each year, which would enable Great Britain to ſuſtain with honour and dignity a protracted conteſt. He had no reaſon for ſuppoſing, that unleſs demands were made on this country by foreign powers who might wiſh to make a common cauſe with Great Britain againſt the enemy, that the whole expence of the war would exceed 26,000,000l. That ſum he conſidered as an enormous charge, but he hoped it would be the extent of the expence the country would ſuſtain.—If the new taxes ſhould, by any miſcalculation, or by having over-rated the ſums they would eventually produce, fall ſhort of the eſtimates he had ſtated, to the extent of 2,500,000l, no greater neceſſity would be impoſed on the country than a loan from the commiſſioners on the conſolidated fund of 6,000,000l. In the ſtatement he thus ſubmitted to the conſideration of the committee, all claſſes of the community were deeply intereſted, and he would be guilty of the moſt groſs injuſtice to the moſt humble peaſant in the country, did he not ſay that he felt anxious on the preſent important conjuncture, and to the utmoſt extent of his ability would cheerfully contribute his mite to the exigencies of the ſtate. In the year 1787, he had heard an hon. friend (Mr. Wilberforce) ridicule the idea of a peaſant ſitting with a ruſhlight reading a newſpaper, pointing out the policy of Great Britain having continental alliances.—Theſe remarks he would not ſay were not well timed, but certainly they could not apply now. The peaſantry of Great Britain at preſent would feel they were called upon, to a certain extent, to ſupport the government of the country in which they lived; they were not men of heterogeneous principles, they were the ſame who ſhared in the glories of Abercrombie in the plains of Egypt, and in the laurels of lord Nelſon at Aboukir. The queſtion with them, and the whole Britiſh people, was, whether they would ſubmit to be trampled on and inſulted, or, by a great and noble effort, maintain their rank in the catalogue of mighty nations.—Every inſinuation to the contrary of theſe great and general principles, which the ingenuity of man could not overturn, was ſubverſive of every effort on the part of government for the preſervation of the empire, the dignity of the people, and the honour of the king. He, in common with his majeſty's miniſters, and he hoped with all who heard him, felt the full force of the neceſſity of that effort, and it was alſo from a knowledge of the high ſpirit of the country, that ſuch an effort would be made on the part of government. In ſtating this, he could aſſure the committee, that his majeſty's miniſters had been forced into the war; that it had been with extreme reluctance they had been compelled to the meaſures they had undertaken, but that they would have been deſerving of the reprobation of their fellow ſubjects, and all the ignominy poſterity could beſtow on their memory, had they not in the preſent awful criſis come forward to aſſert and vindicate the honour of the Britiſh empire. Notwithſtanding the many aſperſions which had been thrown on his majeſty's miniſters, he could ſtate, and that with a great ſpirit of confidence and pride, that in no inſtance would they compromiſe the dignity of the Britiſh crown, nor the honour or independence of its ſubjects — Miniſters wiſhed to manifeſt to the world dignity without arrogance, firmneſs blended with every energy. He was well aware that it required a very great degree of fortitude to avow theſe principles; but theſe principles he would avow in defiance of any clamour which might be ſet up againſt them. Let it be recollected, that laſt year, when the thoughts of peace were alive, that miniſters brought forward the taxes upon a large ſcale, the produce of which at preſent was ſo much in hand, and entirely rebuts the charge of want of foreſight on the part of his majeſty's government. In repealing the income tax laſt ſeſſion, he ſtated his opinion of its efficacy, and gave notice, ſhould any rupture take place, it ſhould be renewed, as a war tax, to a certain extent. He aſked the aid of parliament on the preſent occaſion; he aſked the aſſiſtance of all the people of the realm; he expected to find cordial co-operation in all ranks and degrees, and that the houſe, by its vote, would prove themſelves worthy of the monarch, under whom they lived, worthy of the people they had the honour to repreſent, and worthy of the country in which they had the happineſs to dwell. He concluded by moving, that 12,000,000l be raiſed by annuities on ex-

chequer bills, whereof two millions were to be raiſed by Ireland. This reſolution, and the others founded on the foregoing ſtatement, were ſeverally agreed to. The houſe was reſumed, and the report was ordered to be received to-morrow.

Tuesday, June 14.

On the queſtion being put for bringing up the report of the committee of ways and means of laſt night containing the budget,

Mr. ADDINGTON felt it to be his duty to correct a miſtake which had happened laſt night in bringing forward the new duties. In ſtating the duty on wine, he had inadvertently ſaid, that it was propoſed to lay a duty of five pounds per pipe, or ten pounds per ton. The fact was, that it was intended to lay a duty of ten pounds on the pipe, or twenty pounds on the ton of wine imported. On tea an alteration was alſo intended to take place. Laſt night he had ſtated that a duty of fifteen per cent. *ad valorem*, was intended to be laid on the coarſe teas imported, and a duty of 45 per cent. on fine teas. Since laſt night, he had been engaged in a communication with ſeveral gentlemen who had very extenſive dealing in that trade, and they had ſuggeſted the propriety of doing away the duty on the coarſe teas of fifteen per cent. and impoſing on teas in general the higher duty of 45 per cent. The reaſon which they gave for this alteration was very ſtrong, and one which had made a deep impreſſion on his mind, namely, that if both duties exiſted means would always be reſorted to in order to defeat the revenue by ſinking the fine tea into that of the inferior kind.

Mr. W. SMITH argued that, notwithſtanding the increaſe on wine to 20l per pipe, that the produce of the duty would fall ſhort half a million of the right hon. gentleman's eſtimate, as he believed there were not thirty thouſand pipes of wine annually imported.

Sir HUGH INGLIS ſaid, that the additional duty on tea would raiſe the duties on that article ninety per cent.

After ſome further converſation the report was brought up; the reſolutions agreed to, and bills were ordered to be brought in purſuance thereto.

Wedneſday, June 15.

Mr. VANSITTART brought up the 12,000,000l. loan bill, and a bill granting additional duties on all exports and imports, and on the tonnage of ſhipping. —Adjourned.

Thurſday, June 16.

Mr. ALEXANDER brought up the report of the committee of ſupply, granting 20,000l for the purpoſe of repairing roads and building bridges in the Highlands of Scotland. The report was agreed to, and a bill was ordered to be brought in purſuant thereto.

Friday, June 17.

Lord HAWKESBURY brought down a meſſage from his majeſty to the following effect:—'His majeſty thought it right to inform the houſe of commons, that he had been deſirous of averting the calamities of war from the Batavian republic, and had ſignified his intention to that effect, provided the French troops were withdrawn from Holland. This propoſition had not been acceded to by the French government, and his majeſty had directed his miniſter to leave the Hague; and had given orders for letters of marque and reprizals to be iſſued againſt the ſubjects of the Batavian republic. His majeſty regretted this event, but that he had been induced to theſe ſteps from a ſenſe of the dignity of his crown, and the intereſts of his people.'

Lord Hawkeſbury moved an addreſs to his majeſty, thanking him for the gracious communication contained in the meſſage, which was agreed to *nem. con.*

Saturday, June 18.

A communication from his majeſty, for the more effectual defence and ſecurity of the united kingdom, was received, ſimilar to that delivered by lord Hobart, in the houſe of lords this day.

[To be continued.]

STATE PAPERS.

AUSTRIA.

HIS imperial majeſty has ſanctioned, as ſupreme head, the *concluſum* of the empire, upon the conditions following:

The convention concluded at Paris on the 26th of December laſt, and communicated to the deputation, ſhall be maintained in full validity and obligatory force, agreeably to the literal tenor of its articles, and particularly in what regards the reſervation contained in article 4.

The rights of his majeſty, as emperor and ſupreme head of the empire, to which thoſe reſervations refer, ſhall be maintained

inviolate, both during the execution of the preſent deciſion, and in all future caſes.

The confirmation of the fundamental laws of the empire, mentioned in the *concluſum* of the diet of the 24th March, and particularly of the treaty of peace of Weſtphalia, and of the ſubſequent treaties, ſo far as they have not been formally changed by the treaty of Luneville, and the preſent deciſion of the diet, as alſo the reſervation propoſed in this deciſion, for the maintenance of the Germanic conſtitution, in all points in which it has not been formally changed, and ſuch as that conſtitution has hitherto exiſted in reſpect to the electors, princes, and ſtates of the empire, comprehending the Teutonic and Equeſtrian orders. All theſe confirmations and reſervations ſhall be maintained and carried into effect.

The difficulty which his imperial majeſty ſhewed on the occaſion of the votes *curiles* in the college of princes, produced by the firſt propoſitions of the deputation, not having been in any manner removed by the propoſitions ſubſequent, his majeſty ſees himſelf obliged, by the duties which he has ſworn to fulfil for the maintenance of the Germanic conſtitution, and the protection of the catholic religion, to ſuſpend, for the preſent, his ratification upon that point, and to reſerve himſelf to demand, by a decree of commiſſion, which will forthwith be paſſed, that there ſhall be a further *concluſum* of the empire upon this ſubject, in order that, by ſuitable propoſitions, it may be provided, that (the proteſting party having already obtained a majority ſo deciſive, in the college of the electors, and in that of the free towns) the ancient relations between the two religions ſhall not be ſo changed in the college of princes, as to occaſion a diſproportion that may entirely derange the parity of votes.

Relative, alſo, to the points in the laſt *concluſum* of the deputation, which ought to be ſubmitted to further examination and deliberation, ſuch as thoſe mentioned at the end of ſections 2, and 39; his majeſty and the empire reſerves to themſelves to interfere at a proper time.

His imperial majeſty, giving, under theſe reſervations and conditions, his formal ſanction, as ſupreme head of the empire, to the *concluſum* of the diet of the 21ſt of March, ſeizes this opportunity to expreſs his thanks, and the thanks of the empire, to the high mediating powers for their ſolicitude, and for the pains they have taken in this important affair. His majeſty further indulges the ſure hope, that thoſe powers will recogniſe the proofs given by the emperor and the empire, of regard to their amicable wiſhes and propoſitions; and that the act of peace, thus terminated, will be ſecured and confirmed in the moſt laſting manner.

HOLLAND.

Note preſented by Mr. Liſton to Citizen Vander Goes, Secretary of State for Foreign Affairs.

Sir,

BY order of my court, I beg you to ſubmit to the Batavian government the following conſiderations:—

The king is animated with the moſt earneſt deſire that the new war, which has juſt broken out, ſhall not extend to the countries connected with France; and that it ſhall not involve in its calamities nations which have had no part in the events that have given riſe to it. His majeſty, however, cannot adopt toward the Batavian republic the conduct which ſuch ſentiments would dictate to him, unleſs the French government is diſpoſed to adopt an analogous ſyſtem.

If France will conſent to withdraw immediately her troops from the territory of the republic; if ſhe will releaſe the Batavian government from the obligation of furniſhing any ſuccours whatever by land or ſea; if, in ſhort, ſhe will permit the republic to obſerve a ſincere and perfect neutrality during the continuance of the war; his majeſty will engage on his ſide to adhere with ſcrupulous exactneſs to a reciprocal neutrality, and, in that caſe, the veſſels which may have been proviſionally detained, ſhall be immediately releaſed. But if unhappily the firſt conſul perſiſt in determining to occupy the Batavian territory, and to convert the reſources of the country into means of hoſtility and attack upon Great Britain, his majeſty will feel himſelf forced, by what he owes to the ſafety of his territories, and the deareſt intereſt of his people, to recur to thoſe meaſures which Providence has placed in his hands to fruſtrate the deſigns of his enemies.

It will, however, be with a ſentiment of the deepeſt regret that the king will ſee the Batavian government involved in a war, which muſt be as little conformable to their intentions as to thoſe of his majeſty himſelf.

Receive, Sir, the aſſurance of my diſtinguiſhed conſideration.

R. LISTON.

Hague, May 24.

CAPTURE OF HANOVER BY THE FRENCH.

Edward Mortier, Lieutenant general, Commander in Chief, to the Miniſter at War.

Head Quarters,

Citizen Miniſter, Nieuburg, June 4.

BY my letter of the 29th May, I had the honour to render you an account of the march of the French army againſt the Hanoverian territories. After exceedingly fatiguing marches over barren ſands and heath-covered marſhes, I took a poſition on the 1ſt of June, before Wechte. I had taken care to aſcertain that the enemy guarded the line of the Hunte. General Hammerſtein, who commanded the advanced guard of the army of the king of England, occupied Diepholz, with the 2d and 6th regiments of cavalry, and a diviſion of artillery. I made preparations for driving him from that poſition on the morning after the morrow. This ſecond diviſion, commanded by general Schiner, the diviſion of cavalry, commanded by general Nanſouty, received orders to march toward Goldenſtedt, to force the paſſage of the Hunte, and to direct their march toward Suhlingen, in order to cut off whatever might be ſtationed between that place and Diepholz, which the diviſion of general Montrichard had orders to attack as briſkly as poſſible. The enemy perceiving that by this movement he was turned on his right, fell back, during the night, on Borſten. On the 1ſt inſtant, the advanced guard, commanded by general Drouet, had a very warm ſkirmiſh before Bauver, with the rear of the enemy's army. On the 2d, the body of the army was collected together before Suhlingen; the advanced guard marched to Borſſen: they there fell in with the enemy, and, notwithſtanding his ſuperiority in numbers, and the extreme fatigue of the troops, who had marched on that day the diſtance of twelve leagues, general Drouet gave orders to attack. The enemy kept up a ſtrong cannonade; ſome ſquadrons of the 2d regiment of huſſars charged the light dragoons of the 9th regiment with great valour; they broke the line of that corps, which they put to flight, and took a number of priſoners.

I had been appriſed by my ſcouts that the *tete du pont* of Nieuburg was repaired, and that the enemy had collected the whole of his artillery on the right bank of the Weſer. I was ſenſible of how importance it was for me to haſten my movement. I put the reſerve of my artillery in motion, and I made every preparation for forcing and driving into the Weſer all that was before me, and either to force the *tete du pont* of Nieuburg, or to paſs the ferry at Stolznau, and thus intercept the communication with the capital.

The troops were already in motion, when the civil and military deputies from the regency of Hanover preſented themſelves at my advanced poſts; they requeſted me to ſuſpend my march, and informed me they were ready to make advantageous propoſitions.

I declined accepting them: they returned with freſh propoſals. I gave them to underſtand, that I ſhould liſten to none, unleſs I were aſſured of being put in immediate poſſeſſion of the country of Hanover, and eſpecially of the fortreſſes which are dependent thereon. After a pretty long diſcuſſion, they ſigned a convention, which I accepted, on condition that it ſhould be ratified by the reſpective governments. This convention will ſhew you that the army of the king of England are priſoners of war, that I am maſter of the whole country, and particularly the mouths of the Elbe and the Weſer.

At Nieuburg we found 14,000 new muſquets, and a quantity of artillery. According to the accounts I have received, I have reaſon to expect that I ſhall find in the magazines and the fortified places of Hanover about 100,000 muſkets, and more than 1,000 pieces of cannon.

The day after to-morrow I ſhall be at Hanover, the continental capital of the king of England. I have procured a great number of horſes, to new mount the cavalry, and furniſh anew the artillery and waggons.

I have every reaſon to be pleaſed with the diligence and zeal of general Dulauloy. I have the honour to be, &c.

EDWARD MORTIER.

CONVENTION.

ART. I. Hanover ſhall be occupied by the French army, and likewiſe the fortreſſes dependent thereon.

II. The Hanoverian troops ſhall fall back behind the Elbe. They ſhall engage, on their word of honour, not to commit any act of hoſtilities, nor to bear arms againſt the French army or their allies, as long as the war ſhall laſt between France and England. They ſhall not be releaſed from this engagement, till after they are

exchanged for ſo many general officers, officers, non-commiſſioned officers, French ſoldiers or ſailors, who may now be in the hands of England.

III. No individual of the Hanoverian troops ſhall quit the place ſpecified for his reſidence, unleſs the commander in chief be informed of it.

IV. The Hanoverian army ſhall withdraw with the honours of war: the regiments ſhall take away with them their field pieces.

V. The artillery, powder, arms, and ammunition of every kind, ſhall be placed at the diſpoſal of the French army.

VI. All the effects of whatever kind, belonging to the king of England, ſhall be left at the diſpoſal of the French army.

VII. Seals of ſequeſtration ſhall be affixed to every kind of treaſure or bank; that of the univerſity ſhall preſerve its diſtinction.

VIII. Every Engliſh officer, and every agent of whatever deſcription, in the pay of England, ſhall be taken into cuſtody, and ſent into France.

IX. The general in chief reſerves to himſelf the power of making in the government, and in the authorities conſtituted by the elector, ſuch changes as he may think fit.

X. The whole of the French cavalry ſhall be mounted anew at the expence of Hanover; the electorate ſhall likewiſe provide for the pay, the cloathing, and the proviſion of the French army.

XI. The form of divine worſhip ſhall be maintained on its preſent eſtabliſhed footing.

XII. Perſons, property, and the families of the Hanoverian officers, ſhall remain under the ſafeguard and protection of French ſovereignty.

XIII. The revenues of the country, ariſing both from the electoral dominions and the public contributions, ſhall be at the diſpoſal of the French government.—The engagements hitherto entered into ſhall be punctually fulfilled.

XIV. The preſent government of the electorate ſhall abſtain from all acts of authority throughout the whole of the country occupied by the French troops.

XV. The commander in chief ſhall raiſe upon the electorate of Hanover ſuch contributions as he may deem neceſſary for the wants of the army.

XVI. Every article reſpecting which doubts may ariſe, ſhall be interpreted in favour of the inhabitants of the electorate.

XVII. The preceding articles ſhall form no obſtacle to the ſtipulations that may be agreed upon between the firſt conſul and any mediating power.

Provided always that the firſt conſul approves.—

EDWARD MORTIER,
Lieutenant-general, commander in chief.

F. DE BREMER,
Judge of the electoral court of juſtice, and provincial councillor.

G. DE BOCH,
Lieutenant-colonel, commander of the electoral regiment of guards.

Head quarters at Sublingen, June 3.

NAVAL INTELLIGENCE.

Admiralty-office, June 4, 1803.

Extract of a Letter from the Hon. William Cornwallis, to Sir Evan Nepean, Bart. dated on board the Dreadnought, at Sea, the 24th May, 1803.

CAPTAIN Pearſon, of the Doris, has juſt joined me with a French national lugger, which, I am ſorry to ſay, upon his firing at to bring her to, returned the fire, and continued a running action, until the French lieutenant, commanding the lugger, was killed, with ſeveral of his men: luckily, only one man was wounded on board the Doris. I have the honour to encloſe captain Pearſon's letter.

Sir, Doris, at Sea, May 23, 1803.

I have the honour to acquaint you, that, while in obedience to your orders of the 18th inſtant, cruizing off Uſhant, in his majeſty's ſhip Doris, under my command, I fell in with the French republican lugger L'Affronteur, commanded by Monſ. Morce Andre Dutoya, lieutenant de vaiſſeau, mounting fourteen long nines, with ninety-two men. As ſhe made ſail to eſcape me, I fired a ſhot wide of her, with the hope that ſhe then would have ſhortened ſail, as I was gaining faſt upon her. As this was without effect, I fired a ſecond, which ſhe returned, and kept up a running fire till the inſtant I laid her alongſide; nor did ſhe then give up a conteſt ſo fraught with temerity, until the firſt captain and eight men were killed, and fourteen wounded, one of whom is ſince dead of his wounds.

I am happy to add, that the damage on our ſide conſiſts only in one man wounded, and a few ſhot in the hull and rigging.

I am, &c.

R. H. PEARSON.

HISTORICAL CHRONICLE.

MAY. 7.

A TRICK of a moſt extraordinary kind was practiſed on the lord mayor on Thurſday laſt. A pretended letter from lord Hawkeſbury to the lord mayor, was delivered at the manſion-houſe, informing his lordſhip the diſpute with France was amicably adjuſted. It was as follows:

To the Right. Hon. the Lord Mayor.

Downing ſtreet, 8 A. M.

Lord Hawkeſbury preſents his compliments to the lord mayor, and is happy to inform him, that the negociation between this country and the French republic has been amicably adjuſted.

The letter was ſealed with lord Hawkeſbury's ſeal.

The lord mayor made enquiries reſpecting the perſon who had brought it, and the reſult was ſo far ſatisfactory, as it correſponded, from the appearance of the meſſenger and his aſſertions, with the nature of ſuch a caſe. His lordſhip, thus ſatisfied as to any doubts which he might have entertained, and eager to communicate the happy event to his fellow citizens, took a copy of it, which was inſtantly affixed outſide the manſion-houſe, as follows:

'May 5, 1803.

'Lord Hawkeſbury has this morning informed the lord mayor, that the negociation with the French republic is brought to an amicable concluſion.'

A ſecond copy was ſent to Lloyd's, and his lordſhip went himſelf with the original to the ſtock exchange. Soon after he returned to the manſion-houſe, and about ten o'clock he wrote a letter to lord Hawkeſbury, expreſſive of his thanks and joy for the information.

Stocks immediately roſe 5 per cent. They were 70½, 71—69¾, 70½.

Soon after twelve o'clock, however, the lord mayor received, by one of the clerks of the treaſury, a note from Mr. Vanſittart, announcing to his lordſhip that the letter he had received was a forgery.

Never was there ſeen ſuch a ſcene of conſternation and confuſion as that which immediately took place. The fall of the funds was of courſe rapid and great—the 3 per cents fell below 63—they then recovered a little, and roſe to 64;—a riſe and fall of 7 per cent. in one morning.

The lord mayor, as ſoon as he was informed of the fraud that had been practiſed upon him, iſſued hand-bills, offering a reward of five hundred pounds for the diſcovery of the parties concerned in the forgery.—No diſcovery has yet been made of the authors.

May 10.

Police-office, Hatton garden.—A few days ſince, a man of the name of Frompton, was, at the inſtance of the *ſociety for the ſuppreſſion of vice*, examined upon a charge of having taken illegal inſurances in the lottery. It appeared, that he had been in the habit of employing 14 men and women, in different parts of the town, to collect premiums of inſurance. He was committed, under the vagrant act, to ſix months impriſonment, and his ſervant acting under him for one month.

May 16.

On Saturday the lord mayor received the following letter from lord Hawkeſbury.

'Downing-ſtreet,

'My lord, May 14.

'I think it right to inform your lordſhip, that Mr. Lial, the meſſenger, has juſt arrived with diſpatches from lord Whitworth, by which it appears that lord Whitworth had received his paſſports, and on the point of leaving Paris when the meſſenger came away on Thurſday evening.

'I have the honour to be,

'Your lordſhip's

'Moſt obedient humble ſervant,

'HAWKESBURY.'

'To the Right. Hon. the Lord Mayor.'

MAY 20.

At the Court at the Queen's Palace, the 16th of May, preſent the King's moſt excellent Majeſty in Council.

WHEREAS, in conſequence of the repeated inſults and provocations which his majeſty has experienced from the government of France, his majeſty finds himſelf compelled to take ſuch meaſures as are neceſſary for vindicating the honour of his crown, and the juſt rights of his ſubjects; his majeſty, therefore, is pleaſed, by and with the advice of his privy-council, to order, and it is hereby ordered, that general repriſals be granted againſt the ſhips, goods, and ſubjects of the French republic, ſo that as well as his majeſty's fleets and ſhips, as alſo all other ſhips and veſſels that ſhall be commiſſioned by letters of marque, or general repriſals, or otherwiſe, by his majeſty's commiſſioners for executing the office of lord high admiral of Great Britain, ſhall and may

lawfully ſeize all ſhips, veſſels, and goods belonging to the French republic, or to any perſons being ſubjects of the French republic, or inhabiting within any of the territories of the French republic, and bring the ſame to judgment in ſuch courts of admiralty within his majeſty's dominions, as ſhall be duly commiſſionated to take cognizance thereof; and to that end, his majeſty's advocate-general, with the advocate of the admiralty, are forthwith to prepare the draft of a commiſſion, and preſent the ſame to his majeſty at this board authoriſing the commiſſioners for executing the office of lord high admiral, or any perſon or perſons by them empowered and appointed, to iſſue forth and grant letters of marque and reprifals to any of his majeſty's ſubjects, or others whom the ſaid commiſſioners ſhall deem fitly qualified in that behalf, for the apprehending, ſeizing, and taking the ſhips, veſſels, and goods belonging to the French republic, or to any perſons being ſubjects of the French republic, or inhabiting within any of the territories of the French republic; and that ſuch powers and clauſes be inſerted in the ſaid commiſſion, as have been uſual, and are according to former precedents; and his majeſty's ſaid advocate-general, with the advocate of the admiralty, are alſo forthwith to prepare the draft of a commiſſion, and preſent the ſame to his majeſty at this board, authoriſing the ſaid commiſſioners for executing the office of lord high admiral, to will and require the high court of admiralty of Great Britain, and the lieutenant and judge of the ſaid court, his ſurrogate or ſurrogates, as alſo the ſeveral courts of admiralty within his majeſty's dominions which ſhall be duly commiſſionated to take cognizance of, and judicially proceed upon all and all manner of captures, ſeizures, prizes, and reprifals of all ſhips and goods that are or ſhall be made, and to hear and determine the ſame, and according to the courſe of admiralty and the laws of nations, to adjudge and condemn all ſuch ſhips, veſſels, and goods as ſhall belong to the French republic, or to any perſons being ſubjects of the French republic, or inhabiting within any of the territories of the French republic; and that ſuch powers and clauſes be inſerted in the ſaid commiſſion as have been uſual and according to former precedents; and they are likewiſe to prepare and lay before his majeſty at this board a draft of ſuch inſtructions as may be proper to be ſent to the ſaid ſeveral courts of admiralty in his majeſty's foreign governments and plantations for their guidance herein; as alſo another draft of inſtructions for ſuch ſhips as ſhall be commiſſionated for the purpoſes abovementioned.

From the court at the Queen's palace, the 16th of May 1803.

[Here follow the ſignatures of thirty-one members of the privy-council.]

[The above is followed by three other proclamations: the firſt, offering bounties to ſeamen; the ſecond, recalling Britiſh ſeamen from foreign ſervice; and the third, prohibiting the Britiſh ſhips from entering the ports of the French and Batavian republics, and alſo ordering an embargo on French and Batavian ſhips in Britiſh ports.]

MAY 21.

DUEL.—On Wedneſday evening another fatal duel took place near Chalk farm. The parties were a Mr Thomas O'Reilly, an officer in the army, and a gentleman of the name of Hobart.—They met at ſeven in the evening, in a field a little to the north of the houſe, attended by their ſeconds. The combatants fired at the ſame moment, and Mr. O'Reilly was ſhot in the body, near the hip, on receiving of which, he ran ſome ſhort diſtance, and then walked, but before he could get to Chalk farm, he fainted with loſs of blood. The ball, which had lodged near the ſkin on the oppoſite ſide, was ſoon after extracted by Mr. M. a ſurgeon, who happened to be at Chalk farm, notwithſtanding which he died on Thurſday afternoon, about half paſt three o'clock. Mr. O'Reilly was a very young man.—In conſequence of this duel, ſeveral perſons were on Thurſday evening examined before ſir Richard Ford, who has iſſued warrants againſt Mr. Hobart, and the two ſeconds, in which they ſtand charged with the wilful murder of lieutenant O'Reilly. The ſeconds were, to lieutenant O'Reilly, Mr. O'Grady; to Mr. Hobart, captain Butler.

EXPORTS and IMPORTS.—It appears from the accounts of the cuſtom-houſe, now lying on the table of the houſe of commons, that our exports amounted laſt year to 48,500,683l, which is 6,800,000l more than the foregoing year, and this only the Britiſh produce and manufactures. Our foreign merchandize augmented alſo ſtill more in proportion. Our exports of foreign merchandize has trebled ſince the year 1792, and that of our manufactures and produce has increaſed fifty per cent. Our imports have not increaſed nearly in an equal proportion; thus the balance in favour is great beyond example. Laſt

year our imports amounted to 1,750,000l, leſs than the year before, which, added to the exceſs of exports, makes an augmentation of balance in our favour in laſt year of 8,550,000l.

SEAMEN and TONNAGE of VESSELS. —The whole number of ſhips cleared inward during the laſt year in England was

Britiſh built - -	11,100
Foreign - -	3,389
Tonnage of Britiſh	1,561,000
Tonnage of foreign	434,174
Britiſh ſeamen -	93,902
Foreign ſeamen -	24,953

The clearance outward was, in all reſpects, except as to the value of the cargoes, very nearly the ſame. In Scotland the exports and imports in tonnage amount to about one-ſixth of England, but the veſſels are ſmaller, and therefore amount to above one fifth of the number.

COTTON TRADE of IRELAND —By papers now lying on the table of the houſe of commons it appears that the duties paid on Britiſh cotton twiſt and yarn, amounted to 550l only, in the year 1790. That from that time till the union it averaged about 3000l annually, but that ſince then it has averaged 15,000l, and laſt year amounted to 21,727l 9s 6d. This is a great argument in favour of the union, as it affects manufacturers in that country.

MAY 26.

On Tueſday, at a court of aldermen, the lord mayor nominated the nine following gentlemen to be propoſed to the livery on Midſummer-day, for their election of two of them to be ſheriffs of London and Middleſex, for the year enſuing.—Edward Forſter, eſq. citizen and mercer; William Webb, eſq citizen and vintner; William Rowlatt, eſq. citizen and glover; Thomas Coles, eſq. citizen and wheelwright; James Gaſcoigne, eſq. citizen and ſalter; William Row, eſq. citizen and broiderer; Edward Smith, eſq. citizen and ſkinner; Henry King, eſq. citizen and butcher; James Hayes, eſq. citizen and glaſs-ſeller.

James Hayes, eſq. and Edward Forſter, eſq. paid each of them a fine of 400l and twenty marks to be excuſed ſerving the ſaid offices.

Yeſterday the ſeſſions commenced at the Old Bailey, before the judges, the lord-mayor, recorder, &c.

June 4.

Copy of a Letter from Mr. R. King to Lord Hawkeſbury, dated London, May 15th, 1803.

London, May 15, 1803.

My Lord,

In the preſent critical poſture of affairs, I loſe no time in communicating to your lordſhip, for his majeſty's information, that a treaty was ſigned at Paris, on the thirtieth day of April laſt, by the plenipotentiaries of America and France; by which the complete ſovereignty of the town and territory of New Orleans, as well as all Louiſiana, as the ſame was heretofore poſſeſſed by Spain, has been acquired by the United States of America. In drawing up this treaty, care has been taken ſo to frame the ſame, as no to infringe any right of Great Britain in the navigation of the river Miſſiſippi.

I flatter myſelf that this communication will be received with ſatisfaction, and regarded as a new proof of the diſpoſition of the United States to obſerve toward his majeſty a ſpirit of amity and confidence, important at all times, and more eſpecially ſo in preſent circumſtances, to the harmony and mutual proſperity of the two countries.

I avail myſelf of this occaſion, to renew to your lordſhip the aſſurance of diſtinguiſhed conſideration, with which I have the honour to be, &c.

RUFUS KING.

Right Hon. Lord Hawkeſbury, &c. &c.

Copy of a Letter from Lord Hawkeſbury to Mr. King, dated May 19th, 1803.

Downing-ſtreet, May 19th, 1803.

Sir,

Having laid before the king your letter of the 15th of this month, in which you inform me, that a treaty was ſigned at Paris on the 30th of laſt month, by the plenipotentiaries of America and France, by which the complete ſovereignty of the town and territory of New Orleans, as well as of all Louiſiana, has been acquired by the United States;—I have received his majeſty's commands to expreſs to you the pleaſure with which his majeſty has received this intelligence, and to add that his majeſty regards the care which has been taken ſo to frame this treaty as not to infringe any right of Great Britain in the navigation of the Miſſiſippi, as the moſt ſatisfactory evidence of a diſpoſition on the part of the government of the United States, correſpondent to that which his majeſty entertains, to promote and improve that harmony and good underſtanding which ſo happily ſubſiſt between the two countries, and which are ſo conducive to their mutual benefit. I have it alſo in command to aſſure you, Sir, that the ſentiments which you have expreſſed in making this communication, are conſidered by his majeſty's government as an additional

proof of that cordiality and confidence which you have uniformly manifeſted in the whole courſe of your public miſſion, and which have ſo juſtly entitled you to the eſteem and regard of his majeſty's government.

I deſire you to accept the aſſurances of the diſtinguiſhed conſideration with which I have the honour to be, &c.

HAWKESBURY.

Rufus King, Eſq. &c. &c.

JUNE 6.

Saturday being the ſixty-fifth anniverſary of the birth of his majeſty, the ſame was uſhered in with the ringing of bells, and the firing of the Park and Tower guns, &c.

JUNE 10.

Yeſterday the lord mayor went in ſtate, with the addreſs of the city of London, attended by the ſheriffs, aldermen, a numerous train of common councilmen and liverymen, the recorder, chamberlain, &c. when his majeſty being ſeated on the throne in the great council chamber, they were introduced, and his lordſhip preſented the addreſs, which his majeſty graciouſly received.

June 11.

Monday, about three o'clock in the afternoon, a thunder cloud paſſed over the metropolis, which, during a ſhort period, exhibited a very alarming aſpect; the diſcharge of the electric fluid was directly over head, and very near the earth, as was evident from the flaſhes of the lightning and the report of the thunder, the former very vivid, and the latter tremendouſly loud, happening both at the ſame inſtant. During the tremendous ſtorm, which laſted about half an hour, the ſtreets were deluged with rain. At the King's Arms, College-ſtreet, Weſtminſter, the lightning ſtruck the chimney of the houſe, which it damaged, the electric fluid entering the attic ſtory, it was conducted by the bell-wires to the landlord's bed room, and from thence down the ſtair-caſe into the parlour, in which a number of perſons were ſitting, who fortunately received no injury. All the bell-wires were broke, except one, the communication being cut off, and ſome parts of them were melted into little round balls, the ſize of a pin's head; the ſide of the ſtair-caſe had the appearance as if ſmoked by a candle, as had alſo the parlour. At Mr. Geſſing's, Belvedere-row, Narrow walk, Lambeth, it entered the garret window, and ſet fire to ſeveral of the apartments, but by the activity of the Weſtminſter firemen, it was prevented from doing much damage.

On Thurſday evening, at five o'clock, a moſt ſingular phenomenon took place in Panton-ſtreet, Hay-market. The inhabitants were alarmed by a violent and a tremendous hail and ſhower ſtorm, which extended only to Oxendon-ſtreet, Whitcombe-ſtreet, Coventry-ſtreet, and the Hay-market—a ſpace not more than about 200 acres. The torrent from the heavens was ſo great, that it could only be compared to a wonderful caſcade from the brow of a precipice for ſeven minutes, ſo that the cellars of all the inhabitants in Panton-ſtreet and Oxendon-ſtreet were filled with water. In the midſt of this hurricane an electric cloud deſcended in the middle of the ſtreet, and fell in the centre of the coach-way, and ſunk in a great depth, without leaving a veſtige, or any particle of matter, but formed a complete pit.

On Wedneſday were executed in the Old Bailey, purſuant to their ſeveral ſentences, the following malefactors:—Abraham Nicholas, for having ſecreted a letter containing a bank note; Peter Gregory, for forgery; and Robert Smith, for highway robbery.

June 22.

Several rendezvous of great infamy have lately been ſuppreſſed by the magiſtrates of the police-office in Hatton-garden, at the inſtance of the *ſociety for the ſuppreſſion of vice*. Theſe were houſes in which dances were held in the neighbourhood of Clerkenwell, and a private theatre in Green-ſtreet, Bedford-row, which were frequented by ſervants, apprentices, and tradeſmen's ſons and daughters. To theſe midnight revels the young people were ſeduced from their friends, and plunged into irretrievable ruin. It was a contrivance of the wretches who kept theſe houſes to detain the thoughtleſs parties by a ſupply of liquor till ſo late an hour, that they did not dare return to their homes, but were then eaſily prevailed upon to ſtay the night through, and were accommodated with beds. It is far more eaſy to conceive than deſcribe the fatal conſequences of ſuch diabolical practices.

JUNE 25.

Yeſterday a court of common hall was held at the Guildhall of the city of London; when aldermen Shaw and Leighton were elected ſheriffs for the year enſuing. The other officers were, as uſual, re-elected on Midſummer day.

CAPTURES FROM THE ENEMY.

LA Francaiſe, French frigate, of 44 guns, by the Minotaur.

L'Impatient corvette, 20 guns, by the Naiad.

Two gun veſſels, three guns each, by the Immortalité.

La Colombe, of 16 guns, by the Dragon.

Marengo privateer, four guns, by the Albion.

SUMMER ASSIZES.

HOME—Lord Ellenborough, and juſtice Heath.

Northern—Baron Thompſon, and juſtice Chambre.

Norfolk—Lord chief baron, and baron Hotham.

Oxford—Juſtice Lawrence, and juſtice Le Blanc.

Weſtern—Lord Alvanley, and baron Graham.

Midland—Juſtice Groſe, and juſtice Rooke.

MARRIAGES.

CHARLES Littledale, eſq. of Harley-ſtreet, to miſs Catharine Louiſa Caſtell, third daughter of Samuel Caſtell, eſq. of Bruton-ſtreet.

Philip Dundas, eſq M. P. to miſs Wedderburn, daughter of ſir John Wedderburn, bart.

Lord Cloncurry, to miſs Eliza Morgan.

Captain Weller, to miſs Caroline Raikes, daughter of Robert Raikes, eſq. of Glouceſter.

Colonel W. B. Davies, to miſs Maria Blair.

D. Gould, eſq. captain in the navy, to miſs Willes, daughter of the archdeacon of Wells.

Arthur Cayley, jun. eſq. of Groſvenor-place, to miſs Lucy Cayley.

Francis Bedwell, eſq. at North Cray, to miſs Sarah Percival.

Lieutenant-colonel Maitland, to the hon. Louiſa Crofton, ſecond daughter to the right hon. lady Crofton.

Right hon. lord Redeſdale, lord high chancellor of Ireland, to the right hon. lady Frances Percival.

Henry Cadwallader Adams, eſq. of Anſty-hall, Warwick, to miſs Curtis, eldeſt daughter of ſir William Curtis, bart. of Cullands-grove, Southgate.

Captain Langford, of the navy, to miſs Ramſbottom, of Windſor.

Lord Viſcount Glerawley, to lady Is St. Lawrence, daughter to the earl of Howth.

Lieutenant-col. Taylor, to miſs Baker.

DEATHS.

ROWLAND Conyers, eſq. aged 78.

Dowager lady Hoghton, relict of the late ſir Henry Hoghton, bart.

Sir John Payne, bart.

Mrs. Popham, wife of major-general Popham.

Mrs. Hinton, aged 88, and, within twenty-four hours after, Mr. Hinton, aged 83, of Much-Wenlock.

Baroneſs dowager Camelford.

Rev. John Lynch, LL. D. archdeacon of Canterbury.

Mrs. Lindſay, of Dublin, aged 112.

Mr. Conolly, of Ireland, conſidered the firſt commoner in that country.

Vice-admiral ſir George Home, bart.

Sir John Davie, bart.

Rev. Thomas Heckford, aged 84.

Benjamin Pitts, of Bath, aged 99.

Henry Swinburne, eſq. at Trinidad.

Earl of Enniſkillen.

Dowager lady Dukinfield, of Bloomſbury-ſquare, aged 88.

W. Whittingſtall, eſq. of Hoddeſden, Herts.

Hon. Mr. St. John, eldeſt ſon of viſcount Bolingbroke.

Lady Caroline Fitzroy, ſixth daughter of the duke of Grafton.

Rev. Mr. Porteus, nephew of the biſhop of London, and in a few hours after Mrs. Porteus, his wife.

Mrs. Swinſen, at Long Buckby, Northamptonſhire, aged 103.

Right hon. George Murray, D. D. and biſhop of St. David's.

Rev. H. R. Courtney, biſhop of Exeter.

Joſeph Richardſon, eſq. M. P.

Robert Jephſon, eſq. author of Braganza, &c.

Sir Archibald Dickſon, bart. admiral of the blue.

Right hon. William lord Banff.

Colonel William Vanas.

Matthew Hill, eſq. of Newman ſtreet, aged 77.

Lord Harroby.

PROMOTIONS.

COLONEL Charles Green, William Bulkeley Hughes, eſq. and Francis Hartwell, eſq.—knights.

Earl of Dorcheſter—lord lieutenant of the county of Dorſet.

Duke of Cambridge, K. G.—to be lieutenant-general in the army.

Spencer Smith, eſq.—to be envoy extraordinary at Wurtemburg.

Henry Watkin Williams Wynn, eſq.—to be envoy extraordinary at Saxony.

Spiridion Foreſti, eſq.—to be his majeſty's reſident to the republic of the Seven Iſlands.

Sir Matthew Bloxham, knt.—alderman of Bridgeward.

PREFERMENTS.

REV. Thomas Burgeſs, D. D.—biſhop of St. David.

Rev. John Fiſher, D. D.—biſhop of Exeter.

BANKRUPTS. From the GAZETTE.

APRIL 26.

J. HUDSON, Devonſhire-ſquare, merchant.

J. Harris, Exeter, coach maker.

J. Jones, Wood-ſtreet, Cheapſide, Leghorn hat-warehouſeman.

W. Watkins, Hereford, joiner.

J. Agnew, Groſvenor-ſquare, banker.

J. Donald, Aldermanbury, warehouſeman.

W. Chater, Charles-ſtreet, Long-acre, coach ſpring-maker.

T. Jones, Auſt, Glouceſterſhire, vintner.

W. Freeman, St. Martin's, Northampton, grocer.

W. Johnſton, Whitehaven, mercer.

S. Jacobs, Tabernacle-walk, Finſbury-ſquare, dealer.

J. Gane, Bridgewater, Somerſetſhire, innkeeper.

APRIL 30.

C. Newman, Shakſpeare-walk, Ratcliffe-highway, ſlopſeller.

J. Byron, Great Bell-alley, merchant.

R. Marſden, St. John-ſtreet, upholſterer.

W. Wainwright, Liverpool, ironmonger.

P. Crokat, and T. Stevenſon, Liverpool, merchants.

T. Sawyer, Woolwich, Kent, victualler.

R. Kennett, New Bond-ſtreet, toothache-curer.

J. Spragg n, and W. Spraggon, Graveſend, Kent, ſlopſellers.

W. Linnington, Exeter, currier.

P. Gough, Birmingham, butcher.

W. Claridge, of Garden place, St. George's-fields, bricklayer.

H. Beavis, Upper Thames ſtreet, victualler.

J. Raffield, Old Bond ſtreet, builder.

J. Sedgewick, Manchester, cotton-ſpinner.

C. Maſſey, New-ſtreet, Tower, wharfinger.

J. Cox, Leighton Buzzard, Bedfordſhire, corn-merchant.

W. Lang, Riſhton, Lancaſhire, calico-printer.

MAY 3.

W. Brewer, Rocheſter, Kent, coach-maſter.

G. Matthews and T. Turnbull, Budgerow, merchants.

H. Ibbetſon, Pocklington, Yorkſhire, ſpirit-merchant.

H. Gardner, Thames-ſtreet, ſeedſman.

E. Baynes, Rochford, Eſſex, ſhopkeeper.

S. D. Beare, Kenſington, diſtiller.

J. Courties, and J. Stephens, Penryn, Cornwall, ſhopkeepers.

W. Palmer, Sonning, in Berkſhire, butcher.

T. Bradnock, Walſall, Staffordſhire, ſadler.

MAY 7.

C. Larkin, Rocheſter, in Kent, coach-maſter.

T. Dealy, and J. Hallett, Little Queen-ſtreet, Holborn, coach-makers.

J. Kelly, Liverpool, flour-dealer.

W. Malins, Eveſham, Worceſterſhire, malſter.

W. Hippiſly, Shepton Mallet, Somerſetſhire, ſhopkeeper.

S. Garrod, Saxmundham, in Suffolk, taylor.

W. Nicholls, Briſtol, ſoap-boiler.

G. Cowen, Hoxton Town, Shoreditch, oilman.

J. R. Scarſe, King's Lynn, Norfolk, brewer.

G. Dorſet, J. Johnſon, J. Wilkinſon, W. Berners, and J. Tilſon, New Bond-ſtreet, bankers.

F. Skegg, Davies-ſtreet, Berkeley-ſquare, oilman.

W. Garrett, Fenchurch-ſtreet, merchant.

A. Riddell, and R. Riddell, High-ſtreet, Borough, grocers.

F. Lloyd, Bridge-ſtreet, Weſtminſter, linen-draper.

A. Shirelf, Newman-ſtreet, Oxford-road, taylor.

M. Driſcol, and J. Madden, Union-court, Broad-ſtreet, merchants.

J. Brown, Strand, gun-maker.

G. Wilſon, and W. Dixey, Piccadilly, opticians.

MAY 10.

L. Hebdin, Warwick-lane, coffeehouſe-keeper.

T. Druery, Briſton, Norfolk, ſhopkeeper.

W. Jacob, Poole, Dorſetſhire, ſhopkeeper.

T. S. Smith, Prittlewell, Eſſex, victualler.

D. Mackellar, Savage-gardens, wine-merchant.

T. B. Thorne, Manſel-ſtreet, Goodman's fields, baker.

A. M. Arnſtein, London-ſtreet, Tottenham-court-road, linen-draper.

MAY 14.

M. Medford, Finſbury-ſquare, merchant.

S. Maydwell, Wheeler-ſtreet, Spital-fields, ſilk-dyer.

J. Beckley, Southampton, grocer.

E. Former the younger, Stratford, in Eſſex, butcher.

J. Gadd, Briſtol, dealer.

J. Gibbs, Birmingham, button-maker.

R. Bentley, Wellcloſe-ſquare, haberdaſher.

J. Lightly, and J. Thompſon, Upper Thames ſtreet, ſtationers.

A. Thomſon, Bow lane, factor.

R. Hitinſhaw, Palace-wharf, Lambeth, corn-dealer.

F. Renſhaw, Iſlington-road, timber-merchant.

P. Bogue, Whitefriars, builder.

G. Jefferys, New Bond-ſtreet, goldſmith.

MAY 17.

T. Binns, Great Barlow-ſtreet, Marybone, water cloſet-maker.

J. Barber, Manchester, machine-maker.

W. Landell, Berwick-upon-Tweed, ſadler.

T. Booth, and T. Irelande Blakeley, Lancaſhire, dyers.

E. Hallam the younger, Bury St. Edmunds, Suffolk, chymiſt.

MAY 21.

J. Baird, Tottenham court-road, ſtone-maſon.

W. Smith, and J. Aſhton, Newgate-ſtreet, linen-drapers.

J. Neale, and P. Tanner, Cock-hill, Ratcliffe, dealers in coals.

P. Smith, Farnhill, Yorkſhire, ſhalloon-maker.

J. Froſt, Bedminſter, in Somerſetſhire, baker.

W. Hornby, Gainſburgh, Lincolnſhire, eſq. and ſir J. Eſdaile, Marden-aſh, Eſſex, knt. bankers.

S. Malleys, Sculcoates, York, merchant.

C. Cole, York, merchant.

W. Parker, Liverpool, plumber.

J. Littler, St. Clement Danes, goldſmith.

Wm. Ballantyne, of Savage-gardens, Tower-hill, merchant.

MAY 24.

J. Soden, Coventry, money-ſcrivener.

T. Baylett, Biſhopſgate-ſtreet, without, wine-merchant.

J. Grayſon, Eaſtcheap, inſurance-broker.

J. Maning, T. Heavifide, and T. Bereman, Barge-yard, Bucklerſbury, warehouſeman.

H. Allen, Liverpool, merchant.

G. Smith the younger, Lovel's-court, Paternoſter-row, ſilverſmith.

R. Courteen the younger, Great Bell-alley, merchant.

J. Aglen, Providence-row, Finſbury-ſquare, carver and gilder.

J. Weſt, Somer's-place, St. Pancras, plaſterer.

W. Swanne, Red-lion ſtreet, Clerkenwell, broker.

J. Linard, Bridgewater, Somerſetſhire, jobber in cattle.

J. D. Reilly, Bond-court, Walbrook, inſurance-broker.

MAY 28.

T. Hobbs, Barking, Eſſex, dealer.

J. Harmer, Tunbridge, Kent, baker.

T. W. Lewis, Falmouth, merchant.

J. Challener, Coventry, victualler.

W. Markham, Cottingham, Yorkſhire, merchant.

T. Binns, and J. Brown, Tottenham-ſtreet, engine manufacturer.

J. Wilde, J. Watts, and J. Boddy, of Upper Thames-ſtreet, wholeſale grocers.

MAY 31.

C. Williams, Lower Tooting, Surry, mealman.

Mary Harding, widow, and J. Harding, Swanbourne, Bucks, dealers.

T. Jeffs, Stoke Newington, carpenter.

J. Anderſon, Eaſt Smithfield, merchant.

B. Campbell, Princes ſquare, Ratcliffe Highway, inſurance-broker.

S. Hopkins, Leeds, Yorkſhire, merchant.

J. Towndrow, Wennington, Bedfordſhire, hawker.

JUNE 4.

J. Cook, Warren-ſtreet, Tottenham-court-road, linen-draper.

P. D. Van Dyck, A. J. Gevers Lenven, and W. Adriaen de Grunder Vink, of the Circus, Minories, merchants.

A. Thompſon, and B. White, Bow-lane, wholeſale hoſiers.

B. Giorgi, Ratcliffe-highway, chymiſt.

J. Plowes, Leeds, in Yorkſhire, merchant.

W. Drake, Ratcliffe-highway, linen-draper.

W. Huddleſton, Manchester, draper.

JUNE 7.

C. Hall, Ellerton, Yorkſhire, horſe-jobber.

Ann Townley, Shepperton, ſchool-miſtreſs.

J. Lees, and S. Lees, Halifax, Yorkſhire, merchants.

W. Morris, Coventry, mercer.

JUNE 11.

R. Paley, Leeds, in Yorkſhire, ſoap-boiler.

H. M. Bird, and B. Savage, Jefferies-ſquare, merchants.

J. Jarrett, Briſtol, hop-merchant.

N. Kirkman, Great Bolton, Lancaſhire, counterpane manufacturer.

T. Hemens, Dunsford, in Devonſhire, miller.

J. Stewart, Shadwell, chinaman.

W. Watſon, Kennington-lane, Lambeth, cornfactor.

C. Knight, London-ſtreet, Fitzroy-ſquare, engraver.

P. Fryer, Manchester, malſter.

JUNE 14.

J. Lemmon, Saffron Waldon, Eſſex, ſeedſman.

J. Dawſon, St. James'-ſtreet, merchant.

W. Bryan, White Lion-court, Birchin-lane, merchant.

E. Whalley, Bolton, Lancaſhire, cotton manufacturer.

T. Buxton, and T. B. Buxton, Leiceſter, bankers.

T. Rideout, Manchester, merchant.

J. Lowman, Whitchurch, Southampton, coachmaſter.

W. Myall, Woodbridge, Suffolk, victualler.

JUNE 18.

H. Lewis, and W. Chambers, Rathbone-place, Oxford ſtreet, ſhopkeepers.

R. Wallas, King ſtreet, wholeſale linen-draper.

R. Johnſon, of the Woodford Eaſt Indiaman.

H. Warner, Briſtol, baſket maker.

J. Rippon, Bermondſey-ſtreet, Southwark, money-ſcrivener.

W. Beatſon the elder, R. Beatſon, J. Beatſon, and W. Beatſon the younger, of Maſborough, Yorkſhire, common brewers.

H. Pizey, Sun-ſtreet, baker.

E. Waller, Grantham, Lincolnſhire, coach-maſter.

H. M. Bird, and B. Savage, Jeffries-ſquare, merchants.

JUNE 21.

J. Simpſon, Kingſton upon-Hull, ſhipcarpenter.

P. Lotham, Camomile-ſtreet, merchant.

T. Hodgkiſs, Tabernacle-walk, Shoreditch, grocer.

C. Sutton, Liverpool, grocer.

R. James, and W. Wilſon, Church-ſtreet, Greenwich, grocers.

J. P. Welsford, Union-court, London, under-writer.

J. Hamilton, Bread-ſtreet, Cheapſide, merchant.

T. Thomas, Camomile-ſtreet, merchant.

J. Pierrepont, Bunhill row, carpenter.

J. Ribbans, Colcheſter, wine-merchant.

R. Brant, Briſtol, jeweller.

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Per Quarter	61	8	37	5	25	8	22	3

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METEOROLOGICAL JOURNAL, May 1803.

D.	H.	Baro.	Out	T. in	H.	C.	Wind.	Weather, &c. Rain 1,81
1	7	29,73	47	50	57	5	SW 1	chiefly cloudy: little rain
	2	29,67	55	53	57	5	WSW 2	. rain at times and windy night
2	7	29,50	50,5	53,5	60	5	SSW 4	chiefly rain and cloudy
	2	29,49	52	54,5	59	5	SW 4	rainy. heavy ſhower of rain and hail. clear
3	7	29,70	43,5	51,5	55	0	SW 2	. cloudy at times: ſhower [night
	2	29,64	51	52	55	4	SW 3	. leſs wind and fine. ſhowery eve and night
4	7	29,67	45	50,5	57	2	SW 1	hazy. large hail. ſhowers
	2	29,67	48,5	52,5	56	h	W 1	little rain. chiefly cloudy: fine
5	7	29,93	45	51	57	1	W 1	hazy. chiefly cloudy
	2	29,96	57,5	54	51	4	WSW 1	hazy. leſs cloudy: clear
6	7	30,16	47	52	56	1	WSW 1	little foggy. wind N
7	2	30,18	60	56	49	3	N 1	hazy. wind E at eve. cloudleſs
7	7	30,18	45	52	55	1	NE 1	hazy
	2	30,17	64,5	59	40	2	N 1	
8	7	30,28	47,5	54	54	1	N 1	
	2	30,30	66	59,5	45	2	N 2	
9	7	30,29	51	55	58	1	NW 1	hazy. cloudy. chiefly fine
	2	30,31	58	56,5	45	3	N 1	. cloudy night
10	7	30,14	51,5	55	52	5	WNW 1	. little wet
	2	30,12	52,5	57	48	5	NW 1	. fine night: little wet
11	7	30,10	50	55	51	4	NW 1	. chiefly leſs cloudy
	2	30,14	57	55,5	45	3	NW 1	. cloudy at times
12	7	29,92	53	55	51	5	W 2	hazy. fine. ſhower: fine
	2	29,94	62	58	45	2	NW 2	
13	7	30,18	46	53	48	2	WNW 2	
	2	30,28	57,5	55,5	41	3	NW 2	. clear night
14	7	30,39	48	52	50	h	SSE 1	not cloudy. fine
	2	30,35	61	57	44	1	W 1	
15	7	30,32	47	52	46	1	NNW 2	. little cloudy at times
	2	30,35	56	56	41	4	N 2	. little wet at times. clear night
16	7	30,45	44	50	46	1	NNW 1	hazy
	2	30,39	56,5	53,5	41	2	W 2	hazy. cloudy night
17	7	30,24	49	53	46	4	NW 1	
	2	30,27	56,5	55	43	4	NNW 1	. more cloudy eve and little wet at times: fine
18	7	30,45	47	51,5	46	1	N 1	: cloudy and little wet
	2	30,47	52,5	53,5	46	4	N 1	. leſs cloudy: ſhower
19	7	30,42	47	50	48	3	N 1	. cloudy at times: ſhower
	2	30,46	53,5	53	51	3	N 2	. cloudy eve: gentle rain
20	7	30,32	44,5	51	52	5	N 1	chiefly gentle rain
N	2	30,23	42,5	52	59	5	N 1	gentle rain. fair night: fine
21	7	30,30	48	52	59	3	N 1	little foggy
	2	30,32	57,5	55	56	4	N 1	. more cloudy eve and little wet
22	7	30,23	45	52	56	4	N 2	
	2	30,18	53	52,5	54	4	N 2	. fine. cloudy night
23	7	30,12	47,5	52,5	57	5	N 2	
	2	30,09	52	52,5	57	5	N 1	: little rain
24	7	30,08	46,5	52	55	5	NNW 1	. fine
	2	30,07	55	54	45	3	NW 1	hazy. cloudleſs night
25	7	29,99	50	52,5	56	3	WSW 1	hazy. more cloudy
	2	29,94	57	56	55	5	SW 2	. little wet at night: little rain
26	7	29,82	52	56	60	h	NW 1	. fine
	2	29,92	54	59	46	2	W 1	. cloudy and more wind: little rain
27	7	29,92	57	58	61	5	SW 2	. little rain. fine
	2	29,98	54	60,5	53	3	W 2	. little wet at at night: rain
28	7	29,99	56	59	62	5	WSW 2	little rain. leſs cloudy
	2	30,02	65	63	57	4	WSW 2	. fine night: cloudy
29	7	30,01	54,5	59	58	5	SW 2	
	2	29,92	53,5	60	56	4	SSW 2	. more cloudy. rain. fair night: fine
30	7	29,91	57	60	60	3	SW 2	. more wind
	2	29,82	3	62	55	3	SW 4	ſhowers of hail and rain. leſs wind and
31	7	30,13	55	59	58	4	WSW 1	. chiefly leſs cloudy [chiefly cloudy
	2	30,10	55	61	51	4	WSW 2	. thunder ſhowers. clear night

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30														
31														
1	148 ½	58	59½ 59	73 ½	92 ¾	93 ½	17 ⅛	3 ⅞	178 ½	56 ⅛	10 ½	2		
2	151	58	shut.	74	92		17 ¼			56 ⅜		2		
3	151 ½	58 ⅛	59¾ for op.	74 ⅜	93 ¼		17 ⅜	3 ⅞		56 ⅜	10 ⅛	2		
4														
6		57 ⅞	59⅛	73 ⅛	93 ⅛		17 ⅛	3 ⅞		56 ⅛	10	1		
7	151	57 ⅜	59⅛	73 ½	92 ¾		17 ⅛			shut.	10			
8	151 ½	57 ½	59¼	73 ⅝	93 ¼		17 ⅛	3 ¼		56 ⅜	10	2		
9	150 ¼	57 ⅞	59¼	74	93 ¼		17 ⅛					2		
10	150 ½	58	59¼	74	92 ¾		17 ¼			56 ½	10	2		
11		57 ⅞	59¼									2		
13	150	58 ⅛	60⅛	73 ⅝	92 ⅞		17		180			2		
14		57 ⅛	59¼	73 ¼	92 ½		16 ⅞			55 ⅛		3		
15	145	56 ¼	58⅛	72	91 ½		16 ⅞			54 ⅞		3		
16	146	56 ⅜	58⅛	71 ⅝	91		16 ⅞			54 ½	9 ¾	3		
17	147	56 ⅜	58¼	72 ¼	91 ⅜		16 ¼			55 ¼	9 ⅞			
18		56 ¼	58¼	72 ⅜	91 ⅜		16 ⅛			55 ¼	10	2		
20	145	56 ¼	57¼	72 ⅜	91 ¼		16 ⅛			55		2		
21	146	56 ⅛	57⅞	72 ⅜	91 ½		16 ⅛			55	9 ¾	2		
22		56 ⅜	58	72 ⅜	92		16 ⅛	3 ¼		55 ¼		3		
23	145 ¼	56 ¼	57½	72 ¼	91 ¾		16 ¼	3 ⅜		55 ⅜	9 ⅞			
24														
25		56 ¼	57¼	71 ⅞	91 ⅜		16 ¼					4		
27		55 ⅞	57⅜	71 ¼	91 ⅛		16 ¼			54 ¼	9 ⅛	4		
28		55 ¼	57⅛	71 ½	91		16 ¼					4		

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* This plate is engraved from one in aquatinta by Mr. Barber, and inſerted in the fine paper copy of his "Tour through South Wales and Monmouthſhire," lately publiſhed.

ERRATA.

Page 81, col. 2, line 3, *for* Hall *read* Hill
84, 1, 16, *after* But *inſert* if
85, in the note, *for* provided *read* preſided
205, col. 1, line 35, *for* Mal vagonga *read* Mulivaddy
248, 2, 5, *for* W. *read* E.
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340, 1, 16, *for* array *read* army
356, 1, 45, *for* Edward *read* John
375, 2, 45, *after* to *inſert* make

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